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OBSERVATIONS
ON
TRANSFUSION OF BLOOD.

By Dr. Blundell.

*With a Description of his Gravitator.**

States of the body really requiring the infusion of blood into the veins are probably rare; yet we sometimes meet with cases in which the patient must die unless such operation can be performed; and still more frequently with cases which seem to require a supply of blood, in order to prevent the ill health which usually arises from large losses of the vital fluid, even when they do not prove fatal.

In the present state of our knowledge respecting the operation, although it has not been clearly shown to have proved fatal in any one instance, yet not to mention possible, though unknown risks, inflammation of the arm has certainly been produced by it on one or two occasions; and therefore it seems right, as the operation now stands, to confine transfusion to the first class of cases only, namely, those in which there seems to be no hope for the patient, unless blood can be thrown into the veins.

The object of the Gravitator is, to give help in this last extremity, by transmitting the blood in a regulated stream from one individual to another, with as little exposure as may be to air, cold, and inanimate surface; ordinary venesection being the only operation performed on the person who emits the blood; and the insertion of a small tube into the vein usually laid open in bleeding, being all the operation which it is necessary to execute on the person who receives it.

The following plate represents the whole apparatus connected for use and in action:—

* The instrument is manufactured by Messrs. Maw, 55, Aldermanbury.

Tab. 1.

When the apparatus has been put together for use, the following points of management require the attention of the operator:—

First, an ounce or more of clean water (better if milk warm) is to be poured into the coniform blood receiver, the stop-cock being at the same time shut. Secondly, the vein of the patient who is to receive blood is to be distinctly exposed to the extent of half an inch, or more, the integuments and cellular web being laid open by the scalpel; an operation which may be performed by those who are dexterous at a single stroke of the knife. Thirdly, the venous tubule, see Table 2, Fig. *a*, being plugged into the angular tube which terminates the flexible canula, the operator ought to arrange the apparatus so as to place the tube immediately over the vein of the patient, and then laying hold of the tubes moveably suspended above the vein, he ought to bear down and adjust the flexible arm support, Table 2, Fig. *c*, until the venous tubule is brought into *light* contact with the vein, so that the horizontal extremity of the tube may lie externally along the course of the vessel to the extent of half an inch. This tubule, it should be observed, is of very pure silver, and flexible, and may, therefore, if necessary, be altered a little in its curves, so as to adapt it with nicety to any accidental variation in the direction of the vessel which receives it; but the less tampering with the silver the better. Of course the point of the tubule ought to be directed towards the heart, and its whole length ought to be adjusted to the direction of the vein with great exactness, so that the extremity of the tube may lie within the cavity of the vessel, without straining or otherwise injuring it; indeed, throughout the whole of the operation, the vein must be spared as much as possible.

These preliminary measures taken, the operator, moving the arm a little aside, ought next to lay open the vein with a lancet, to such an extent (say the tenth of an inch) as may ensure the easy entrance of the pipe; and if any blood issues, a small probe may be slid transversely underneath the vein, between the venous orifice and the inferior extremity of the cutaneous wound, so as to enable the operator to close the vein at pleasure, by gently pressing it down upon the probe.

The arm being prepared in this manner, the bracelet, or spring clasp, Table 2, Fig. *i*, (its cup resting rather behind the middle of the screw which supports it, say at point *z*, Table 2,) ought now to be put upon the arm of the patient, to which it will cling, and then the ball and cap, Table 2, Fig. *h*, being adjusted to the cup, but rather lightly, that they may be easily separated again, the operator, taking a firm hold, right and left, of the two springs which form the clasp of the bracelet, he opens them a little, when he may easily advance or retract the clasp along the arm, so as to bring the silver tubule (disarranged by these previous operations) to its just bearings and light contact with the vein externally as before. At this time the nuts of the flexible arm-support, Table 2, Fig. *d*, ought, if necessary, to be screwed tight, so as to give stability to the whole apparatus, and preserve the adjustment.

This accomplished, the operator ought now to open the ball and socket-joint by separating the cap and cup, and laying hold of the apparatus at this part, he should, *with all gentleness*, pass and repass the silver tubule (moveable because suspended by the flexible canula) into the cavity of the vein, so as to satisfy himself that it really does enter the vessel, and that it is not unawares inserted between the vein and its sheath of cellular web, an accident which may easily occur, not without a risk of frustrating the whole operation. After this, again withdrawing the tubule from the cavity of the vein, he may open the stop-cock, when the water in the coniform receiver above will gravitate through the tubes, and being suffered to run for two or three seconds, will completely expel the whole of the air; after which the stop-cock being again closed, the tubes will remain full, (if this part of the operation has been well performed,) a small quantity only of water lodging in the point of the receiver, part of which may be removed, if necessary, by means of a piece of *clean* sponge, a convenience which should always be at hand.

The operation being brought to this point, the venous tubule may now be easily deposited in the cavity of the vessel; when, by turning the screw, Table 2, Fig. *e*, the small cup may be made to pass backward and forward, in the direction of the venous orifice, until it is brought exactly under the cap and ball, to which it is to be afterwards screwed down, care being taken not to derange the vein or venous tubule, neither of which are, on any account, to be disturbed.

The tubule being now retained in the vein at the proper degree of obliquity, the cap may be screwed home upon the cup; and if it be thought necessary to advance or withdraw the tubule a little, as it lies within the cavity of the vessel, this of course may be easily effected by the action of the screw support, Table 2, Fig. *e*, as before.

The hood, Table 2, Fig. *k*, being now mounted upon the receiver, Tab. 2, Fig. *f*, a vein should be opened in the arm of the person who emits the blood, and this arm ought then to be held over the receiver in the usual manner, so that the blood may

flow into it, when the cock may be turned, and the transfusion will immediately begin; the blood flowing along the tube directly from the arm of the person who emits the blood, to the arm of the person who receives it. In this mode of operating, the small quantity of water which fills the tubes will, as a matter of course, enter the veins along with the blood; but though this is certainly undesirable, it does not appear to cause any obvious hurt.

As the operation proceeds, if the blood flow freely, it ought to be collected in the receiver; if it dribble down the arm, it is better not to make use of it. If the pipes become clogged in consequence of the inspissation of the blood, the operation will be arrested: the stoppage of the operation, when this accident occurs, is an excellence of the instrument, not a defect. To clear the apparatus, a syringe is provided, fitting the opening of the stop-cock, by means of which warm water may be forced through the tubes before the blood hardens in them.

In the progress of the operation watch the countenance; if the features are slightly convulsed, the flow of blood should be checked: and if the attack is severe, the operation must be suspended altogether. On the other hand, so long as no spasmodic twitchings of the features, or other alarming symptoms are observed, we may then proceed without fear.

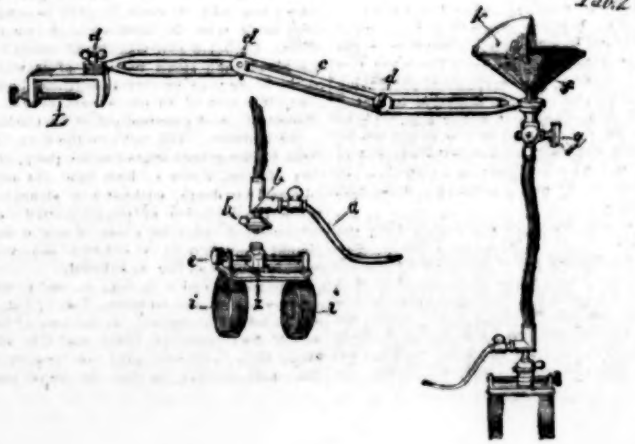
If there be occasion to suspend the operation, all the blood which lies in the apparatus, during the interruption, ought to be cleared away, and warm water being passed through the tubes, the transfusion ought to be commenced afresh.

Throughout the whole process, only a small quantity of blood should be allowed to collect in the receiver at once, nor should its level ever rise above the line drawn around its interior. This line indicates the measure of two fluid ounces.

If the blood collect in the receiver too fast, this may be easily remedied, either by placing a finger below the orifice in the arm of the person who supplies it, so as to check the stream; or else, by requesting him to withdraw his arm, so that the blood may no longer reach the receiver.

In cases requiring transfusion, the heart and vascular system being feeble, there is reason to believe that their action might be arrested by too rapid an influx, and that sudden death might, in that manner, be produced. It is necessary to guard against this accident with care; and it is to be recollected, that by means of the flexible arm-support, the receiver may be placed at any level above the arm of the patient, and that the rapidity of the influx may thereby be increased or retarded accordingly. It should too be observed, the force of the stream may be diminished at pleasure, by means of a partial closure of the stop-cock: and although this tends to produce a slight suction, yet it may, notwithstanding, be the best mode of regulating the impetus of the stream. The force of the stream may also be ascertained, by pouring water into the receiver before the operation is begun, and the elevation of the receiver, or the turn of the cock, may be adjusted accordingly before the operation begins.

The following plate represents the several parts of the apparatus referred to as Table 2:—



Although the description of the instrument must appear complex, its use is simple; in truth, when the transfusion is once begun, the operator has little to do; his principal cares are—first, to see that the cup never empties itself entirely, otherwise air might be carried down along with the blood. Secondly, to make sure that blood which issues by dribbling, from the arm of the person who supplies it, may not be admitted into the receiver, as its fitness for use is doubtful. Thirdly, to watch the accumulation of blood in the receiver, and to prevent its rise above the prescribed level; and, lastly, to observe with attention the countenance of the patient, and to guard, as before stated, against an overcharge of the heart. *This latter cause is of great importance.*

C is the flexible arm, which acts as a support to the rest of the apparatus (excepting the spring clasp, which embraces the arm of the patient): this part of the apparatus is furnished, at one end, with a strong clamp, or vice, Fig. *L*, for the purpose of attaching it to a chair, (a piece of furniture always at hand, and well adapted for the purpose,) and this is placed on the bed beyond the patient, in the manner represented, Table 1. At the other extremity of this flexible arm is a ring, into which is screwed the stop-cock, Fig. *g*, which consists of a flexible canula, having at one end a stop-cock, and at the other an angular brass tube, Fig. *b*, furnished with a ball and loose cap; which ball and cap serve to connect it with the part. Below is the spring clasp, or armlet, intended to cling to the arm of the patient. Upon this clasp is mounted a screw and cup, upon which the cap of the ball is screwed, so as to complete the ball and socket joint, a kind of juncture, giving the universal motion, but capable of being rendered immoveable by firmly screwing home the cap, and enabling the operator to fix the angular end of the canula at any necessary degree of inclination or obliquity. There are two venous tubules, the curvature of one having a bias in the opposite direction to that of the other, so as to suit either arm. These tubules being of pure and very soft silver, are capable of being accurately adapted to the course of the vessel into which they are to be inserted. The coniform blood-receiver *f*, and its hood or partial covering *k*, are contrived to intercept the stream from the supplying vein, and preclude its passing over the receiver; in the apex of the receiver is a triangular partition, which has the effect of preventing that rotary motion and hollow surface sometimes assumed by fluids when passing through a funnel-shaped aperture. The receiver having its hood fitted upon its rim, is then firmly plugged into the opening made to receive it on the top of the stop-cock. A syringe, scalpel, lancet, and silver probe are connected with the apparatus, the uses of which are described above.

FOREIGN DEPARTMENT.

TRANSFUSION AND INFUSION.

The following extract, from a recently published work of Dr. Dieffenbach, of Berlin (of which already some mention has been made in The Lancet) contains an abrégé of the experiments on the above subject, which have been made in France, during the last twenty-five years.

Nysten's experiments on the injection of different kinds of air into the vessels are very interesting. Large quantities of atmospheric air invariably caused death, under extreme distention of the right ventricle; if, however, by the division of the subclavian vein an exit was given to the air, the experiments hardly ever had a fatal result. He never found any air in the arterial vessels, provided the injection had been made into a vein. A small quantity of atmospheric air, injected into the carotid, had no effect whatever; a large quantity caused general paralysis, but seemed to have no direct influence on respiration and circulation, which were, for a considerable time, regularly performed. Oxygen injected in large quantity, into the veins, proved fatal; a small portion of it had no effect. The injection of nitrogen, even in small quantities, and after the division of the subclavian vein, was invariably followed by death; the arterial blood in such cases was found to be of a brown colour. Nitrous oxyd was rapidly absorbed by the blood, and large quantities of it were injected without any ill effect. Carbonic acid was also absorbed by the blood, and small portions of it were easily borne; in greater quantities, however, it appeared to cause pain over the whole body, and eventually death. Carburetted hydrogen, injected into the carotids, caused almost immediate death; the injection of small doses of hydrogen was also followed by death, without any struggle; while the injection of phosphoretted, or sulphuretted hydrogen, caused death, under violent convulsions; the latter gas was quickly absorbed by the blood. Nitrous gas, ammonia, and chlorine appeared to act only by their chemical properties. Nysten concluded, from numerous experiments, that part of the injected gas is thrown off by the lungs during expiration, the greater portion of it being retained in the vascular system. Dogs, which were made to respire nitrogen,

were kept alive for fifteen minutes by the injection of oxygen gas into the veins.

Magendie is of opinion, that transfusion from one animal to another of the same species is attended with no danger, even if the experiment be carried to a very great extent. Injection into the veins, according to him, is the best means of introducing remedies directly into the system, and of examining their specific action; morphine, opium, croton oil, and prussic acid had the same effects when injected as when swallowed; the injection of oil was fatal, by the mechanical obstruction of the ramifications of the pulmonary artery; the same effect was produced by the injection of any mucilaginous fluid. The result of the experiment was modified in a most remarkable manner, if the injection was made into a branch of the vena portæ. In one case, Magendie injected an ounce of oil into a mesenteric vein of a dog, which, immediately after the operation, fell into a state of immobility, with great dyspnœa and involuntary excretion of the fæces and urine; this condition having continued for a few days, the animal spontaneously recovered. A week after the first experiment, the operation being repeated, was followed by the same symptoms, which, however, after a few hours ended fatally. The liver was found uncommonly large, of bright yellowish colour, and exhibited some traces of the oil. The injection of narcotic substances into the veins of rabid animals appeared to have no effect whatever. M. Magendie was led to try the result of an injection of tepid water, after free bleeding; a momentary tranquillity ensued after the operation, (which was performed both on dogs and on men,) but the convulsions, within a short time, returned, with ultimately fatal results. In a case of a wound in the heart, where the introduction of air into the latter organ produced syncope and imminent danger of suffocation, M. Magendie succeeded in almost immediately allaying the most violent symptoms, by the insertion of a silver tube into the jugular vein and pumping out the air.

Percy and Laurent assert, that they have cured tetanus by injecting a strong solution of the extract, or a saturated decoction of stramonium.

The recent experiments of M. Gaspard are very interesting, and but little known. Injection of quicksilver into the veins was followed by a fatal effect, but not immediately nor directly; death ensued under the symptoms of violent pneumonia; if introduced into an artery it caused inflammation and suppuration of the parts, to which it was distributed. Mercurial ointment introduced into the vascular system caused extreme weakness and a state of asphyxia, which, after a transitory re-action, ended in death. The injection of calomel was speedily followed by vomiting and subsequent pneumonia; the same effect was produced by the injection of a grain of sublimate; acetate of lead had no sudden effect, but caused chronic enteritis. The injection of a small quantity of purulent matter, mixed with water, produced great prostration of strength, vomiting, and, after a few hours, a bloody diarrhœa, which symptoms ultimately ended in recovery. Larger quantities of pus introduced into the circulation caused death within a very short time; putrid serum caused dysphagia, bloody dejections, vomiting, and death an hour after the operation. The lungs were found of a dark-red colour, inflamed, and their vessels obstructed with viscous matter; the villous coat of the intestinal canal was inflamed, and the internal organs extensively ecchymosed. No difference was observed, as to effects of the experiments, between carnivorous and herbivorous animals.

The saturated decoction of oak bark caused violent dyspnœa, palpitation, and death; if the decoction was weak, it produced hardly any effect, and M. Gaspard is of opinion, that the diluted solution of astringents might best be administered in this manner. The injection of diluted sulphuric acid, immediately after that of putrid sanies, had no effect in obviating the fatal results of the latter; nor was there any better effect observed from the injection of the decoction of bark, the solution of chlorine, soda-water, or vinegar. The injection of human seminal fluid caused dysphagia, dyspnœa, vomiting, salivation, involuntary excretion of fæces and urine, and insensibility; in all the experiments with it, however, the animals ultimately recovered. Nearly the same effects were observed from the injection of the bile of herbivorous animals; that of carnivorous animals was generally followed by death. The injection of serum caused nearly the same symptoms as that of semen. A strong decoction of the ergot of rye produced violent pain and immobility of the hind legs, dyspnœa, and, if administered in large quantities, death. The injection of most of the above-mentioned substances into small arteries was hardly ever fatal, and terminated in inflammation and suppuration of the cellular tissue. In one case of hydrophobia, the infusion of tepid water into the veins was tried, but without any effect.

From the experiments of MM. Dumas and Prevost, it appears, that in animals which were almost killed by depletion, the injection of warm water, or serum, had not the slightest effect; if, however, blood of an animal of the same species was transfused, in almost every case speedy and com-

plete recovery ensued; if the transfused blood was taken from an animal of a different species, a transient reaction only took place, and death followed before the sixth day; in the latter experiments, respiration did not appear to be disturbed; the pulse was very quick, and the temperature low. The blood of sheep injected into the veins of ducks produced very violent convulsions and death shortly after the experiment.

In a case of violent hysterical trismus, a solution of about seven grains of opium was injected into the basilic vein, by M. Coindet, of Geneva; the patient felt as if a current of fire was running from the arm through the chest and head, and thence to the whole surface of the body, and the spasm, which had resisted several remedies, subsided almost immediately.

The injection of urea into the femoral vein of a dog produced no other effects than increased secretion of urine and great voracity; two ounces being injected into the veins of a dog caused great restlessness and death within ten minutes; the injection of a smaller quantity was found to be followed by emaciation, which, on the fourteenth day, proved fatal. On examination, the lungs were found hepatised.

The injection of strong alcohol was immediately followed by death; diluted spirit produced a state of intoxication; the extract of nux vomica produced tetanus and death within a very short time.

ON THE

IMMATERIALITY OF THE MIND,

And its Identity with the Vital Principle; and on the Constitution of the Soul: in reply to Mr. Dermott.

By John Thomas, *Esq., Demonstrator of Anatomy.*

The constancy with which you advocate free discussion, and the desire you often express of eliciting truth, persuade me that apology for again troubling you will be needless, and induce a belief that you will provide, without solicitation, a corner in your journal for the following remarks.

In your Number for May 23d, is an excellent paper "On the Functions of the Brain," by Mr. Dermott, a paper containing observations evidently the result of much thought, and which certainly shows that he possesses a metaphysical mind, which by all, I believe, is considered as of the highest order of intellect. I confess I hesitate to enter the lists of controversy with one of such mental capacity, and endowed with so much acute perception. I hesitate, I say, when I consider this; but, on the other hand, when I reflect that it is a duty imperative on every one to be vigilant in the cause of truth, and where he *thinks* he perceives the encroachment of error to dispute its progress, and make a stand against it, my hesitation yields to a sterner feeling; and though the risk of defeat and contumely glare on me, I dare the contest, persuaded that my discomfiture will be the result of the victory of truth. I venture, therefore, with these views, to dissent from the opinions of Mr. Dermott, and to state, that after the most deliberate consideration, I believe them to be quite at variance with *revealed* truth. Without, then, pretending to be wise above what is written, I shall, in this paper, *first*, present your readers with what appears to me to be the interpretation of Mr. Dermott's theory; *secondly*, give as concise a history of my own, as is compatible with distinctness; *then* raise objections to it, which I will endeavour to answer as they arise; and, *lastly*, conclude by some *general* observations, more *particular* ones being precluded by what has gone before.

Mr. Dermott's theory then appears to me to resolve itself into the following particulars:—

I. That the *brain* is the sole originative cause of thought, and, therefore, "it is one and the same thing as the mind," which, for this reason, he calls "a material principle."

II. That this "material principle" is common to all animals, and that the only difference between the brutes and man as an animal is, that in him this principle is more perfectly developed than in them.

III. That the *essential* difference between man and brutes is, that the former has superadded, or "attached to his existence," a principle which, in common parlance, is termed the soul; which is not conscious during this life, but is cradled up, as it were, or preserved in embryo in some place, (in the pituitary gland, for this is well defended from rude aggression?!) but "not demonstrable."

IV. That this material principle is the "ostensible representative" of this undeveloped, unconscious, "dormant," and insensible soul during man's terrestrial existence. That though *not free* to act, nor sensible to moral or physical impressions in this life, *it is responsible* for the reprehensible acts of the material principle or brain; for which, though it could not control them, it receives retribution when it awakes from its torpor, or comatose condition, in the world of dread reality; and "because it is the continuation of the same individual's existence."

This, then, appears to me to be the construction which, without any straining, may legitimately be imposed on Mr. Dermott's "theory." And here permit me to observe once for all, that if Mr. Dermott is of opinion I have misinterpreted his sentiments, I hope he will attribute the error, not to wilful misrepresentation, as that I utterly disclaim, but rather to the hebetude or obliquity of my understanding. I shall proceed now to give as concise a history of my own theory as is compatible with distinctness; and in doing so I may premise, that any absurdities it may be thought to involve, are attributable solely to me, as I have consulted neither books nor persons on the subject, it being purely the result of my own speculations, upon what I have thought substantial grounds.

I. *First*, then, I maintain that the vital principle operates immediately upon the brain, and intermediately upon all other parts of the human system; that the brain is the machine, as it were, by which the operations of the mind are made manifest; and that this mind is identical with the vital principle.

II. *Second*, I cannot admit the ubiquity of the vital principle, but I do the universality of its influence; and I believe that the principle of life itself resides in the brain, and no where else.

III. *Third*, I grant the degree of perfection of mental *manifestation* depends upon cerebral development, in the same way that perfect action in a steam engine does on the excellence of its works; but I cannot admit that the brain is the mind, any more than I can that the engine, whose function is motion, is the fire or steam by which it is caused to act.

IV. *Fourth*, I deny the identity of the vital principle in man and the inferior animals, and, therefore, I propose to distinguish that which actuates the former by the term *human principle*, and that by which the latter are influenced as the *brute principle*; and this, I believe, is perishable, but the other is immortal.

V. *Fifth*, but this immortal, human principle cannot exist separate from deity, unclothed by, or independent of, matter; it is not the soul, however, but is a constituent of what will hereafter form an incorrupt and immortal soul.

VI. *Sixth*, I cannot agree with Mr. Dermott, that what is commonly called the soul is "dormant during life," or that it has any "representative." I believe that the vital principle, which is to be the quickening principle of a new and glorious body (σῶμα) after death, is of itself active and energetic during its mundane existence; that it conceives, reflects, and acts, and for its conceptions, reflections, and actions, is alone responsible, and will be rewarded according to the deeds done in the (σῶμα ψυχικον) animal or mortal body.

VII. *Seventh*, I believe the soul (by the soul here, I mean that which shall exist after death) which is scripturally denominated (σῶμα πνευματικον) a spiritual *body*, is substantial, i.e. an immortal creature, endowed with the properties of matter, inimitably beautiful, and the perfection of the Creator's works. I use the word spiritual (πνευματικον,) as I believe it is generally used by the sacred writers when speaking of the body with which we shall rise again, in opposition to animal and carnal (ψυχικον και σαρκικον).

VIII. *Eighth*, I cannot believe with Mr. Dermott, that when the brain dies, the "individual's existence is continued" by the "dormant soul:" it is not scriptural; I think it is unphilosophical and untrue. The soul, or, as I call it, the immortal human principle, I have said is coeval with the body, and always active; I believe, therefore, that at death it drops, as it were, the husk or shell by which it is inclosed, and becomes reinvested in a new body, (σῶμα πνευματικον,) subject to no deterioration, and that its *own* existence is continued, freed from connexion with the (σῶμα ψυχικον) animal or mortal body, which is impure, and has stamped upon it, like all things terrene, decay and dissolution; and,

IX. I believe that this immortal body (σῶμα πνευματικον,) similar in appearance, and, in fact, in every thing sufficient for identity with the mortal body (σῶμα ψυχικον,) will hold the same relation to surrounding objects in the world to come, as Adam, our great progenitor did at his creation and before the Fall; hence I infer that heaven is a place, and not a state of being.

These, then, comprise the substance of my opinions, which are diametrically opposite to those of Mr. Dermott. I shall proceed now to raise as many objections as I possibly can; they will be founded on established opinions, Mr. Dermott's theory, and the peculiarity of my own views, and I shall endeavour, as they arise, to answer them; but this I expect not to do to the satisfaction of every one, I shall content myself, therefore, with the attempt, and leave your readers to their own decisions.

Objection I.—How can the mind be identical with the vital principle, seeing that the principle of life is said, by high authority, to pervade all parts of the system; if the identity be admitted, then mind must be universal, and is it not absurd to place mind in the stomach, liver, lungs, &c.?

Answer.—The assertion that the doctrine of the omnipresence of the vital principle is believed by high authority, adds nothing to its validity, from the fact, that authorities

the most formidable differ among themselves. For my own part, as I have before stated, I cannot admit the ubiquity of this principle; if it were present in every part of the body, why need there be such a plentiful distribution of nerves to all the regions, and these nerves, too, ultimately referrible to the brain and spinal marrow? These nerves are known to preside over voluntary and involuntary motion and sensation; but they themselves do not determine if motion or sensation shall take place in certain parts; if they did, they might not please to be consentaneous in their operations, whence much confusion might arise. But they convey to the mind intelligence of external circumstances, upon the knowledge of which it frames its resolutions, which it causes to be enforced by a class of nerves subservient to its purposes. Hence we perceive that the power which presides over the animal, is situated at the confluence of the nerves, is acted upon, and acts. I say, then, it resides only in the brain; and that it does not in the spinal marrow, is proved by the fact, that in fracture of the vertebræ, with depression, all voluntary motion and sensation cease below the injured part;—that it does not reside in the solids, is proved by the fact, that if the nerves distributed to a part be insulated, the same thing results; but it is still alive; the part lives, not because the principle is innate, but because its influence upon the circulatory system continues, which causes the vessels still to convey the pabulum of life to it for its support: stop the flow of blood to the part, and the consequence is its death. The residence of the vital principle being established in the brain, which is its palace, where it sways the sceptre of its sovereign will, I come now to consider the question of its identity with the mind. I think I have shown that the vital principle does not exist in every part of the body; if, therefore, I prove the identity of the mind with it, I shall have completely answered the question, as far as its absurdity is concerned; but in order to save time, I will raise the next objection, and endeavour to answer both.

Obj. II.—Is not all animal matter influenced by, and subject to the same laws; and do not like effects proceed from like causes; and if so, can there be a difference between the vital principle of brutes, and that of man, seeing that they, in their operation on matter, produce similar results?

Answer.—There can be a difference, and the same effects may be derived from causes the same in some respects, but dissimilar in others. For example, there may be two watches, one of which indicates the hour and minutes, the other, in addition to this, points out the seconds; now the power which moves the hands in both is similar, since they produce the same results, namely, those of telling the hours and minutes; but they differ in this; that the latter watch has a power superior to the former, and can, therefore, produce a different effect. So, I conceive, it is with the brute principle, and the human principle; for the power of one is superior to the other, and this difference, I believe, depends upon the *two dissimilar sources* from which they were produced, and not, as is by some supposed, upon the difference of organisation alone. If we peruse attentively the history of the animal creation, as recorded by Moses, we shall there find a very circumstantial account, which points out so clearly, "that every one who runs may read" the origin and cause of difference between the two principles. "And God said, Let the *earth* bring forth the living creature after his kind;" "and God made" (or spoke into existence) "the beast of the earth;" "and God saw that it was good." Moses then, in chap. i. ver. 26, relates the creation of the first human pair; but not satisfied with a general account, he details more particularly the manner in which man was created, and how he became a living soul. "And the Lord God formed man of the dust of the ground, (Gen. chap. ii. ver. 7,) and breathed into his nostrils the breath of life (το πνευμα του βιου); and man became a living soul (ἐγένετο εἰς ψυχὴν ζῶσαν)." Now the creation of the inferior animals is very analogous to that of the vegetable kingdom; vegetable life and brute life were both conferred *by the command of God*; "and God said, Let the earth bring forth grass, &c.;" but, in the creation of man, the Deity condescended "to breathe into his nostrils" a part of his own pure essence; he chose to animate man's body, which he had formed from the dust of the ground—"*divinæ particulâ auræ*;" and since he had made man "*in his own image*," he determined to confer on him such a principle of life as should be not only sufficient for animal existence, but which should partake of his own divine nature, and thus, at once, supply him with vitality, mind, and immortality. Is it then, I ask, irrational to suppose the mind identical with the vital principle; and that the human principle and the brute principle are not the same, seeing that they are derived from two such different sources—*the one* from the *earth* in common with vegetation, and *the other* from *God* himself? He might indeed have commanded man to exist, when he said, "Let the earth bring forth the living creature;" he might, too, have bestowed upon him immortality; but no, he willed a higher relationship than that for man—he inspired into him a particle of his own nature, and thus formed him the pure offspring of himself.

Obj. III.—Do we not say "soul and body;" how then can the soul be a constituent of the soul which exists hereafter; is it not a pure elemental spirit—an entity which can exist independent of matter, though, indeed, connected with it during life; if so, is it not absurd to make it a constituent of a new creature?

Answer.—The word Σῶμα, I find, is used by the writers of the New Testament, both when they speak of this mortal body, and of that which man shall possess after death. It is a word deduced "from the Heb. שׂוּם to place, as being the *place* of the soul." Now if the sacred writers use the word σῶμα indiscriminately, when speaking of the animal and spiritual bodies, may we not infer that the σῶμα in both instances is for the purpose of enclosing or containing the responsible and immortal principle of man? It is not my intention to discuss the nature of spirit, or to enter into inquiries "of entity and quiddity," or such like metaphysical speculations; my object is to show that the spirit of man, the human principle, or by whatever name it may be called, at death merely quits a corruptible for an incorruptible body (σῶμα). Death I consider as nothing more than a purifying process; one by which the immortal constituent of man is freed from a tainted incumbrance. Paul's illustration of the resurrection, 1 Cor. xv., I think, is simple, beautiful, and very much to the purpose; some, he says, will inquire "*πῶς δὲ σώματι ἔρχονται;*" with what *body* will they (*οἱ νεκροὶ*, the dead) come? And adducing the example of a grain of wheat, he replies, "*οὐ τὸ σῶμα τὸ γενησόμενον σπείρεις,*" thou dost not sow that *body* which shall be hereafter, i. e. the mortal body is not that body which will form the place of the immortal principle, any more than the exterior of a grain of wheat is the plant which grows from it, and afterwards produces similar grains. No; man's body first dies, and then the vital principle which once animated it, forsakes it for ever. It appears to me absurd to suppose that the mortal body ever rises again; one might be pleasant here in favour of dissection, but all that could be said may be easily imagined by the most common understandings, therefore we will let it pass. At death, then, the spirit leaves the animal or mortal body, (*το σῶμα ψυχικον,*) and becomes invested in a new, incorruptible, and spiritual body (*το σῶμα πνευματικον*); this, therefore, is what I understand by the immortal soul, or, in Mr. Dermott's words, "the continuance of the individual's existence." Was not Adam before his fall thus constituted, and if that unfortunate occurrence had not taken place, would he not have been immortal? This is undeniable. What was Adam but a particle of the Deity embodied in a pure and undefiled receptacle; and what is man now, but the same divine principle contained in an impure place; and what is the immortal soul, but the particle of Deity re-embodied in purity? I believe, then, that an immortal soul consists of the human principle, and a body which is incorruptible, (*το σῶμα πνευματικον,*) that it will inhabit a place, and be in its relation to external objects in circumstances similar to Adam, when he reigned sole lord over his domains in Eden. With these views, then, is it absurd to make the human principle, or, as it is in common discourse called, "the soul," a constituent of a new creature? I think not; but we shall see, "when all things have passed away and become new."

Mr. Dermott's opinions, I must confess, tend very much to materialism; by this I mean that they encourage the belief that when matter ceases to live, man's spiritual part dies also. It is true he provides a "dormant" being which is to spring into life at death, loaded with the offences and crimes of thinking matter, for which, though it did not commit them, it suffers, and for no other reason than because "it is the continuance of the same individual's existence." Let me not, however, be misunderstood; I do not say that Mr. Dermott attached this anomalous principle to matter to satisfy the fears of some, or to allay the conscientious qualms of others, or that he did it to ward off the imputations likely to be "attached" to him, were he to form a theory of mind which divested man of his immortality; I do not say this; but still, if his theory be taken simply upon its own merits, I think it authorises the view I have taken of it. As for the mind being the brain, I cannot admit that; shall we say that the rotation of certain wheels in a machine, is the machine itself? Shall we then say that the actions of the heart, lungs, and brain, are those organs themselves? No; but this I think we may affirm, that the brain is an organ composed of various parts, each endowed with a certain faculty, and is acted upon by a principle which causes it to produce various manifestations. The perfection of these results, I agree with him, depends upon the development of the brain; in the same way that the more perfect a piece of mechanism is, the more complete will be its functions, at the same time it is not independent of the moving power, as I have shown above.

Thus, Mr. Editor, I have endeavoured to discuss with candour, the subject to which Mr. Dermott's opinions have given rise; whether I have succeeded in establishing my own, and overthrowing his, or have failed in both, I leave with your readers to decide.

1, Dean Street, Canterbury Square,
Borough, June 4, 1829.

AMERICAN OPINIONS AND PRACTICE.

[*American Journal, February*, 1829.]

FOLLICULAR INFLAMMATION OF THE INTESTINAL CANAL.

Cholera infantum is a disease entirely American; and, in Philadelphia, the number of deaths under two years of age from this complaint is, on an average, two hundred annually. Great, however, as is the store of information which must accumulate, connected with it, there is not one dissection a year reported to the medical public. The affection prevails in the summer among children of two years and under, and the phenomena resolve themselves into a strongly marked change of the alvine evacuations, which cease to be natural and well-elaborated fæces; the natural stools are retained, and such as are passed are derived principally from the chylopoietic viscera themselves. They occur from three to twenty times in the twenty-four hours; these are want of appetite, irritability of the stomach, and vomiting; fretfulness, emaciation, and languor, as the disease advances; delirium, coma, or hydrocephalus, in its last stages. When fatal, it runs its course from a fortnight to six weeks. It is evidently in the mucous coat of the alimentary canal that the true morbid characters are found, the peritoneum being, generally, entirely sound. These consist in an inflammation of the mucous coat of the stomach and small intestines, rarely, if ever, followed by ulcerations. I have some reason however to believe, that the affection is rather a follicular than, as is generally supposed, an erythemoid inflammation; a disease of the innumerable glands or follicles extended from one end to the other of the alimentary canal, rather than a common vascular inflammation. The attention of the reader is called to the following

Dissection.

June 30, 1828.—The child, aged twenty months, has had, for the last three weeks the usual symptoms of cholera infantum, attended with a little hooping-cough. The death was unexpected.

Abdomen: peritoneal surface of viscera healthy; liver of a light yellow colour; gall-bladder distended with bile; spleen healthy. Mucous membrane as follows: that of the stomach of a sienna colour, and of a consistence which permitted it *to be scraped off very readily* with the finger nail. On the small intestines it was generally of the same colour, but interspersed at distant intervals with patches of injected blood-vessels, but no extravasation. The clusters of muciparous glands or follicles were very distinct to the naked eye, and had their orifices also enlarged and tumid. The same condition of the muciparous follicles prevailed in the large intestines from one end to the other; but they were larger and more tumid, and gave to the mucous coat somewhat the appearance of having been sparingly sprinkled with fine white sand. In both small and large intestines the mucus seemed less consistent than usual. The weather being sultry and oppressive, we did not extend the examination further. I carried, however, the whole of the large, and a portion of the small, intestine away, macerated it so as to remove the blood, and then *suspended it in spirits of wine*. This process has made the anatomical characters of the follicular affection much more distinct, by removing the tinge and mucus; and by floating the affected tissue, its folds and processes are kept extended and separated, and thereby give more prominence to the glands or follicles. Thousands of them, the ulceration of which was *previously imperceptible*, are now seen very clearly to be in that state. The maceration and suspension in a fluid, has moreover brought into view several common erythemoid ulcerations on the jejunum, about two lines in diameter, and which escaped my observation entirely during the dissection.

After what has been stated, in this and another similar case, on the *consistence* of the mucous coat of the stomach, it becomes a very interesting object of inquiry, whether this was a normal or a morbid state of its texture. I am as yet deficient in those facts from personal observation, which would enable me to assign some standard of consistence to the mucous coat of the stomach under two years of age. I have, however, no doubt that it is much softer at that period of life than it is in the adult, and the probability is, that from being so soft as to be readily scraped off with the finger nail in the early months of existence, it then increases successively and gradually in its consistence as one advances into old age, and until it becomes a membrane of sufficient tenacity to permit very readily its being dissected up as such with a scalpel. This subject is, however, quite open to inquirers, and sound conclusions upon it made by multiplied observations, would confer a great benefit upon the profession.—*Professor Horner, Univ. Pennsylvania.*

CONTAGIOUS DISEASES.

There are certain diseases considered as contagious, one of the remarkable peculiarities of which is, that when once individuals have gone through them, the charm is dissolved, and they are for ever afterwards in-

noxious. Another circumstance worthy of remark is, that these diseases have their primary seat in the follicular system, as, for example, the small-pox and the chicken-pox. They appear occasionally under such doubtful causes, that the opinion may be reasonably entertained of their spontaneous production in the localities, where they appear from time to time. Have we not then mistaken too frequently this peculiarity of disposition in the organism to fall into certain morbid conditions, for distant sources of contagion, for a power in disease as an essential existence to propagate itself, like plants or animals, by its seeds, as they are ridiculously called? May not cholera infantum, for instance, as a follicular disease of the intestines, be the inevitable lot of every individual of the human family, but under circumstances of various severity, being mild, scarcely perceptible in some, and in others being aggravated by the season of the year, by the local circumstances of the individual, and by his early infancy? May not, in fact, the whole follicular system of the body be successively under the necessity, in most individuals, of undergoing inflammation, the symptoms of which will of course vary, according to the functions of the part in which the follicles are placed, and give rise apparently to diseases having no external analogies? As, for example, in the inherent follicular inflammations of the skin, we have what is called small-pox, from its vesicular or bladder-like appearance;—in the inherent inflammations of the follicles of the intestines, we have what is called a cholera or flux of children, because the bowels are continually expelling their contents, being too irritable in most cases to retain them; and is it not perfectly consistent with the laws of induction, that when a similar innate inflammation attacks the follicles of the trachea and lungs, we shall, of course, have symptoms suited to the organs assailed? In fact, what is hooping-cough but an ingenerate inflammation of the mucous follicles of the air-passages, manifested by the immense transparent mucous discharges, which are brought up by the teacupful after a fit of spasmodic coughing? May not then the theory of contagion rest upon the explanatory fact, that till the ingenerate diseases of the follicular system have been gone through, the individual is liable to have them excited by such individuals as are labouring under a similar affection?—*Professor Horner.*

EFFECTS OF HIGH TEMPERATURE AND COLD WATER ON THE SYSTEM.

The effects of continued high temperatures on the constitution, are the derangement of all the functions of the body, and, ultimately, its destruction. The earlier influences of spring are mildly stimulating; the skin becomes soft and relaxed, the heart beats with greater force, the extreme vessels of the body are filled with a fuller tide, and the fluids of the body come to occupy a larger space. Hence, if the relaxation of the vascular system does not keep pace with this expansion, a tendency to various hæmorrhages from rupture, or other consequences of over-distention, arise; of these are headach, languor, anorexia, constipation, &c. Bloodletting, or cathartics, are each capable of giving a notable share of relief to these disorders. My preference is for the cathartic; the most complete and permanent relief is best gained by a persevering use of aloetics. There are, however, measures by which I think a resort to medicine is rendered unnecessary; reduction of diet, vegetable aliment, a careful avoidance of sudden change in the dress, and the use during the heats of spring and early summer, of ice and iced water, which latter I am disposed to recommend from attentive observation. Cold thus applied, I look upon as one of the most effectual, as well as grateful of our tonics, doing away the feeling of vacuity and oppression at the stomach, so well known to the unhappy dyspeptic, and occasionally felt, perhaps, by every one, relieving all the other irregular sensations of internal heat and irritation, and proving abundantly diaphoretic. Indeed I know not a more prompt and certain sudorific, whether in health or disease, than a draught of water as cold as it can be taken. I am not unaware of the generally received opinions of the danger attending the use of such cold water when the body is heated. I have before me at this moment the treatises of Rush and Currie upon the diseases occasioned by drinking cold water in warm weather. I might content myself by referring to the important discrepancies in their statements and their reasonings upon the subject; the first attributing to the strong contrast, or shock, all the ill effects detailed; the latter, whose reasonings are more full and ingenious, yet still not altogether satisfactory, ascribing them to a debilitating power exerted on bodies already weakened by fatigue and sweating. After due consideration of the facts stated by both, we must come, I think, to the conclusion, that some condition or circumstance essential to the production of the evils detailed, has been overlooked or omitted by both; that is to say, that the death in the single case noted by Currie, and in the similar cases quoted by him from other authors, and the deaths and symptoms recorded by Rush, were not occasioned *simply* by the drinking cold water, either when very hot, or while cooling after having been much heated. It is to be observed, that I do not

doubt or deny the danger of applying cold to the *surface* when in a relaxed state. On this point I fully agree with Currie; but this is foreign to our present discussion. I have never seen a death from drinking cold water, nor have I been able to obtain any authentic account of such an event having occurred since I have been engaged in the practice of medicine in this city. Yet here, if any where, such accidents should occur. Immense quantities of ice and iced fluids are daily consumed here, by persons subjected to the several conditions set down both by Rush and Currie, as calculated to favour the morbid influence of the agent in the highest degree. The effects to be produced by cold drinks while the body is in a heated state, will occur as well when the water is at 80°, or when toddy or punch have been the medium employed.

In cases of phrenitis, which have occurred to me, I have not, in the first instance, employed the lancet. All that could be hoped for from this useful instrument at this period was as perfectly, easily, and surely effected by cold affusions. He who has not learned the efficacy of this simple remedy in cerebral affections, may add an important agent to his list. The patient being raised to a sitting posture, cold water should be poured from the height of a few feet upon his head. The flushed face will become pale, the hard quick pulse will sink to a mere thread, and the coma and stupor will rapidly subside. Again and again the symptoms returning, will call for a repetition of the affusion. I saw in one day five persons in the situation above described, three of whom recovered entirely under this simple means of cure. If the recovery was not thus complete, and mania and phrenitis supervened, the cases were, for the most part, manageable, but now a free use of the lancet became necessary, and purgatives of the *most active* power were demanded.—*Professor Dickson, Med. Col. S. Carolina.*

CASE OF AMNESIA.

It is a question yet to be decided, whether the intellectual and moral faculties have for their various modifications distinct organs, or have the brain as a common organ, in which the different faculties may be displayed. This question is to be mainly resolved, it is most probable, by a careful attention to the intellectual phenomena in a morbid state. In this view, the following case, it appears to me, is deserving to be placed on record:—

The Rev. Mr. R., ætat. 43, is of a sanguine temperament, tends to obesity, enjoys excellent health, his intellect of a high order, temper good, and lively. He has lately experienced some mental anxiety. Sept. 5th, 1828, he awoke early with headach, after a restless night. He had taken a sudden cold the previous evening. Some castor oil now exhibited acted freely, and he again laid down. At eleven I was sent for suddenly, and found him in bed, evidently in the full possession of his senses, but incapable of uttering a word. There was frontal pain over the eyes; the tongue was in no way affected. All my questions were perfectly comprehended, and answered by signs; and it could be plainly seen, by the smile on the countenance, after many ineffectual attempts to express his ideas, that he was himself surprised, and somewhat amused, at his peculiar situation. The face at this time was flushed, the pulse full and somewhat slow, and to my inquiries if he suffered pain in the head, he pointed to the front of his forehead as its seat. I directed hot water to be brought in a bucket, for a pediluvium, and made preparations to draw blood. Mr. R. exhibited at this time a strong desire to speak, and, after a great many ineffectual efforts, endeavoured to make me comprehend his meaning by signs. Finding I could not understand him, he made a sign that he would write. When furnished with pen and paper, he attempted to convey his meaning, but I saw he could not recal words, and that he had written an unintelligible phrase; it was "Didoes doe the doe." Forty ounces of blood were drawn from the arm, and before the operation was completed, speech was restored, though a difficulty continued as to the names of things, which could not be recalled. The bleeding and pediluvium produced some faintness, and he was placed in bed. The loss of speech appearing to recur again, in fifteen minutes, ten ounces more of blood were abstracted, and sinapisms applied to the arms, legs, and thighs, alternately: the skin became moist, and the headach was relieved. Mr. R. now communicated to me, that when he made the attempt to write, he had intended to inform me he had already used a foot bath, and I might see the floor still wet, where the water had been spilt. The sleep that night was disturbed by uneasiness and throbbing in the head, which disappeared in the course of the 6th, and no further return of the affection has occurred.

The inferences to be drawn from these facts, are, 1st. That as the cerebral irritation produced no general affection or disturbance of the functions of the brain, it was local or limited: and, 2d, as loss of language was the only functional derangement of the intellectual faculties, that faculty must have been connected with the portion of the brain, the seat of the irritation; and, 3d. That an organ of language exists in the brain. This case lends a strong

confirmation to the general truth of the doctrines of Phrenology.—*Dr. S. Jackson, Pennsylvania.*

CASE OF TRACHEOTOMY.

A child of Mr. F. took a bean into the trachea, the symptoms attending which, clearly indicated the necessity of an operation, which was performed in the following manner:—A heavy table was provided, with the side leaves turned down, leaving a horizontal surface, sixteen inches wide, covered with blankets, with a firm roll of cloth four inches in diameter across the end. The child was firmly secured on the back by the hands of assistants, the nape of the neck resting on the roll of cloth, the head carried far back over the end of the table. An incision was made from the lower edge of the thyroid cartilage to within a quarter of an inch of the sternum. After waiting a few moments for a slight bleeding to subside, a puncture was made into the trachea, with a slender double-edged scalpel in the centre of the incision, dividing one cartilage; then with a curved probe-pointed bistoury, the puncture was dilated from within outwards, dividing one cartilage above and one below. In this elongated state of the parts, the division of three cartilages made an opening sufficiently free to admit the forefinger of the left hand into the trachea. The finger was introduced to separate the edges of the incision, which did not incline to retract. Immediately after withdrawing the finger, with a spasmodic effort, a bean was expelled with considerable force, and lodged on a bed which stood in the room. This saved us the trouble of attempting that part of the operation which I most dreaded; for experience had taught me to envy no man the pleasure of probing in the trachea for beans or peas. Half an hour after, the opening still retained the shape of the finger, large and free; the divided cartilages had approximated but very little. The wound was then brought together, and secured with adhesive plaster, and being unwilling to disturb the stomach, we gave no medicine, excepting a few drops of laudanum, at the same time directing a spare diet. The plasters succeeded imperfectly, partly in consequence of the action of the mastoid muscles, and because the opening was rather too low on the neck to admit of their being applied to the best advantage. The air rushed through the aperture occasionally for forty-eight hours, but never after. I dressed the wound a few times, and discontinued my attendance in about two weeks. At the time of the accident, the child had not entirely recovered from the hooping-cough, but the cough troubled it very little after the operation. The wound was cicatrised at the end of eighteen days. A short time previous to this, a slight dysenteric affection took place, for which the family gave some domestic medicines. A few worms were discharged, and the child soon recovered, the cough wholly subsiding at about the same time. The result of this case may, I think, be attributed in part to the position of the child when the opening was made. By carrying the head very far back over the cylinder of cloth, the trachea became considerably curved. In the act of coughing, the bean was suddenly carried from one end of the trachea to the other, and when forcibly propelled, would probably incline to the longest side of the curved tube; the opening being in that part, and as large as the cavity of the trachea, we had some reason to expect what actually took place, the expulsion of the bean. By introducing the finger, and turning it a quarter round, the elasticity of the cartilages seemed to be destroyed, or at least suspended for a length of time sufficient for our purpose. In an older subject, the elasticity might not have been so easily overcome in this manner. The operation never seemed much to affect the general health of the child, and the most difficult part of the after-treatment was to restrain the immoderate indulgence of the appetite for food.—*Dr. Howe, Billerica.*

MR. STEPHENS'S REPLY TO HIS VERY IGNORANT REVIEWER.

To the Editor of THE LANCET.

SIR,—I wish it to be understood that I am by no means annoyed by the remarks of a reviewer, on my work, but he having disputed my claim to an important distinction in disease, I felt it incumbent upon me, either publicly to acknowledge my error, or publicly to disprove his statements. A sense of what was due to liberality and justice ought to have compelled him to insert it, but as he refused so to do, I was induced to seek your assistance in giving it publicity; but as a reply in full to his objections probably appears to you unnecessary, I shall be obliged if you will insert the following abbreviation.

The reviewer disputes my claim to the distinction of "obstructed hernia," by saying, that although these cases "have not, perhaps, been dwelt upon by systematic writers, with all the minuteness they deserve," yet that they have been "abundantly known to operative surgeons, and incidentally mentioned by various writers," and he refers his readers to a clinical lecture of Mr. Charles Bell, at page 104 of his

second volume. The distinction of Mr. C. Bell in the said lecture, and of the other writers alluded to, is the same as is described by Scarpa and Mr. Lawrence, under the heads of acute and chronic strangulation, implying an acute and a chronic constriction. Mr. C. Bell has given two diagrams, one showing the intestine empty, the other, showing it in a state of distention, and *constricted*, and this he calls incarceration, because the constriction is not sufficiently tight to constringe the veins, &c. The following are among his words, "Strangulation is another stage, where the stricture *is not only* so tight upon the intestine as to prevent the passage of the contents of the bowels, but also to constringe the veins, and at length to stop the circulation." The reviewer has attempted to make his readers believe, that the incarcerated rupture alluded to by Mr. C. Bell, and by various other writers, is the same as the obstructed hernia which I have pointed out; this I deny, for the obstructed hernia which I have described has never yet been publicly taught, defined, or understood before the publication of my work. I have described a state of fatal obstruction occurring from an affixture of the bowel by adhesions, which interrupts the peristaltic movements, and finally destroys the patient, unless an operation is performed; and this state of obstruction I have particularly pointed out as being independent of any *incarceration*, of any *strangulation*, or of any *constriction*, for in the cases which I have detailed, I could easily reduce the hernia; and in the operation, when I opened the hernial sac, I could pass my fingers along, with a great portion of loose intestine, into the abdomen, *without dividing any stricture*, one portion only being affixed to the hernial sac, and causing the obstruction.

The incarcerated hernia of other authors falls under my distinction of "obstructed hernia," but the distinction which I have drawn is by no means comprehended under the head of incarcerated hernia, as described by them. Incarceration, or constriction, may *accompany* "obstructed hernia," but it is by no means essential to its existence, and this constitutes the important difference in the distinction which I have drawn from that of other authors. The distinction between an incarcerated and a strangulated rupture was comparatively of little practical importance, because a surgeon would not, before operating, stop to inquire whether the constriction was or was not sufficient actually to *strangulate*, or stop the circulation in the intestine; but if called to a patient with a hernia, which was free from pain, tenderness, or tension, and which receded, and appeared to return into the abdomen under very slight pressure, he would not attribute the continuance of intestinal obstructions to the hernia, but to some internal cause, and the hernia being of the kind I have described, the patient's life would be lost in consequence. If I had used in the following passage, "Operations upon hernia are not considered necessary or justifiable, by surgeons of the present day, unless strangulation has occurred," the word *constriction* instead of strangulation, which was nevertheless implied, the reviewer would have had no pretence for saying, that "the obstructed hernia of Mr. Stephens has been particularly pointed out by Mr. C. Bell," and is "abundantly known to operative surgeons."

To show that "operative surgeons" *have not known* that a hernia, having *no kind of constriction* upon it, may yet require an operation, I need only quote, as I have done, in my book, from Mr. Lawrence's last edition of his *Treatise on Ruptures*, "That the symptoms of strangulated hernia arise from the pressure of the stricture on the protruded parts, and that this cause is not only adequate to that effect, but indeed the only one that can be assigned, is too clear to admit of any doubt."—Page 62. If Mr. Lawrence, who is one of the "operative surgeons," had known that the symptoms of a strangulated hernia, differing only in degree, could be produced without any pressure of a stricture whatever, but simply from an adhesion of the bowel to the sac, interrupting its peristaltic movement, would he have written the foregoing passage in his last edition? The "engouement," or obstruction from accumulation, or choking up of fæcal matter, alluded to by Richerand, and quoted by another journalist, is in every respect the same as the chronic strangulation, or incarceration of Scarpa and of Mr. Lawrence, but is in every way essentially different from the obstructed hernia mentioned by me.

The part on inflamed hernia, which explains a most fatal class of cases of rupture, has been misrepresented in some parts, and misunderstood in others, by the reviewer. I have answered his objections in my reply to him, but want of space will prevent me here. My proposal of a probable method of radical cure is objected to by the reviewer, who says, "We refer our readers to Mr. Lawrence's valuable work on hernia, in which they will find little encouragement for attempts at radical cure." Mr. Lawrence objects, that an operation upon a hernia should never be undertaken for *the sole* purpose of a radical cure, because it subjects the patient to danger for the relief of an inconvenience only. His words are—"The subject of an incarcerated rupture submits to the operation to save his life; but he whose hernia is reducible, exposes

his life to avoid an inconvenience."—Page 120. To show that so far from differing, I agree with Mr. Lawrence, I will quote from my book the following passage:—"I wish it to be understood, that I do not recommend the operation to be undertaken for this purpose solely, (radical cure,) but when an operation for hernia becomes absolutely necessary, whether from strangulation, or from obstruction, or in consequence of such symptoms as denote its approach; then let it be borne in mind, that it is possible so to perform the operation, as not only to relieve the peculiar state for which it was undertaken, but also to effect the desirable result of a radical cure of the disease."

The review of that part of the work on mechanical obstructions, is a similar misrepresentation and partial statement. The reviewer says—"The author here passes from the rational and intelligent practitioner, into the enthusiast. The object, in fact, is to propose that, in cases of mechanical obstructions, we should *rip open the belly* and remove them." I have, indeed, recommended, in a case of subacute mechanical obstruction, such as is recorded by Mr. Dalrymple, in Sir Astley Cooper's work, and which I have quoted, where "there is neither tension nor tenderness of the belly, *except at the umbilicus, around which part, to the extent of about a hand's breadth*, a slight degree of pressure gives pain," and where, after death, the intestines are found to present "neither upon their peritoneal coat, nor in the interspaces of their convolutions, any of the usual results of inflammation," except "in the centre of the umbilical region, *and in the situation to which the peculiar sensations* of the patient were referred, (see Sir A. Cooper's work,) I have, in such a case recommended, where the symptoms denote that no destructive inflammation or disorganisation among the intestines has ensued, and where "*the peculiar sensations of the patient*" point out clearly the seat of the obstruction, that "rather than resign a patient to inevitable death," we should "attempt the only possible means of rescue," and for this I am described, by the reviewer, as an enthusiast, and by way of example, he instances a case (of which he says I am obviously ignorant) of artificial anus, where M. Roux "accidentally sewed the wrong ends of the intestine together, in a Quixotic expedition of this kind into the abdomen of a woman, who suffered under *a loathsome* inconvenience indeed, *but one not attended with danger*." To found an argument against an operation for the relief of mechanical obstruction from such a case, is like contending against the expediency of ever having recourse to the operation of amputation, because a surgeon once, in mistake, removed a sound limb, instead of the diseased one. By way of answer, I referred the reviewer to THE LANCET and the Medico-Chirurgical Review for 1825, for the records of a case (of which he was obviously ignorant) extracted from Hufeland's Journal, where a German doctor actually performed this operation of gastrotomy for the relief of intussusception, and the patient recovered. I also referred him to the Medico-Chirurgical Review for 1827, page 188, where he will find, that the editor of that journal is of the same opinion as myself, namely, that "gastrotomy would, in all probability, have saved this man's life," alluding to the case of a servant of Mr. Belzoni, whom he attended.

I shall be obliged by your giving insertion to the above, as the true understanding of the above distinctions are important to the profession, independently of my personal feelings, for which alone I should not have troubled you.

I am Sir, &c.
HENRY STEPHENS.
54, Stamford Street, Blackfriars.

DELICATE PROFESSIONAL APPLICATIONS.

To the Editor of THE LANCET.

SIR,—Having become the partner of the late Mr. Hurst, and the practice devolving at his death on me, I find the enclosed circular has gone the round of my patients.

I have to request that you will publish it; and I beg to be informed, if such means are commonly resorted to, and whether they are creditable or professional?

I am, Sir, yours &c.
E. DAVY.
390, Strand, May 29th, 1829.

P.S. I am bound to request, that the name of the gentleman to whom the enclosed was sent, may not appear. I know nothing of, and have never seen Mr. Clarke.

SIR,—In consequence of the lamented death of Mr. Hurst, your late medical attendant, I beg permission to offer myself to your notice,—the grounds upon which I presume to solicit your patronage are, that I served a five years' apprenticeship to Mr. Hurst, and was afterwards nearly three years his visiting-assistant, during which period, I had the honour of attending most of his patients, although I fear you may have forgotten me, as it is two years since I left Mr. Hurst to practise on my own account, at 4, Charles Street, St. James's Square.

I will take an early opportunity of waiting on you, and have the honour to be

Your obedient servant,
HENRY CLARKE, M.R.C.S.
Monday, May 25, 1829.

COMPARATIVE EFFICACY OF BLEEDING AND QUININE IN INTERMITTENT FEVER.

By THOMAS HEAD, *Esq., House-Surgeon to the Alnwick Dispensary.*

THOMAS LIDDELL, ætat. 21, a countryman, of dark complexion, and not unhealthy appearance, was admitted into the medical ward of the dispensary on the 9th of April; the cold state had gone off; he was, when visited, suffering from headach, thirst, with considerable heat of skin and fever: his pulse was full, and expanded, beating 89 in a minute; the sweating stage succeeded, which lasted about two hours. He gives the following history of his disease; says that he was living as a farm servant in the neighbourhood of North Shields, in a wet and swampy situation, about three weeks ago; that he was exposed to rain, and got his feet wet, in which condition he remained many hours; the day after, he was attacked with headach, sickness, pain in the back, with fever and thirst, for which he used some fever medicines without benefit; after continuing in this state a few days, he was attacked with shiverings, which were succeeded by the hot and sweating stages of ague, that these at first only recurred every other day, but that for a week past he has been seized daily at about two o'clock, P.M.

10. Heat of skin natural; pulse regular, soft, and beating 52 in the minute; tongue clean and moist; bowels moved yesterday; has no thirst; urine rather scanty, and after standing, exhibits a pinky deposit. The cold stage came on at two o'clock, P.M., when about twelve ounces of blood were with difficulty drawn from the arm; the shivering, although not arrested, appeared to be less severe, and of shorter duration than yesterday; the hot and sweating stages were also less urgent, and of shorter continuance.

11. Has passed a tolerable night, and says that he feels free from complaint; skin of the natural heat and moist; tongue clean; pulse 86, full and soft; bowels rather confined, for which he has to take ʒvi. ol. recini in the evening. The cold stage returned at the same time as yesterday, but was certainly less severe, as well as the hot and sweating stages; the shivering lasted twenty minutes, while the hot and sweating stages continued their usual time.

12. The attack was much the same as yesterday.

13. The cold stage occurred at the usual hour; after it had lasted five minutes, fourteen ounces of blood were abstracted, which, in a trifling degree, checked the tremour, and the consequent stages were not severe.

14. Much the same, in every respect, as yesterday; says he feels weak when he attempts to walk.

15. The shivering returned at two o'clock, and twelve ounces of blood were drawn, by which the shivering was checked; the hot and sweating stages observed their usual degree of severity and duration.

16. The cold stage commenced more than an hour earlier to-day, was more severe, and continued longer; the hot stage followed in an aggravated degree, and the sweating was much greater than it had ever before been; says he finds himself much weaker; has always been troubled with a short dry cough during the cold stage, which was before omitted to be mentioned, and which disappears on the accession of the hot stage.

17. Bowels open, skin cool and moist, pulse quick, small, and feeble, which rendered it apparent that the bleedings could not with propriety be repeated, and he was therefore requested to begin at eight o'clock the following morning with four grains of sulphate quinine every hour until twelve o'clock, when eight grains were to be administered; twenty-four grains of the medicine had been taken at half past twelve o'clock, the cold stage came on, seemed less than the day preceding; the subsequent stages were considerably less than they had ever been.

Vespere. Says he feels tolerably well, and has taken some castor oil to obviate costiveness. Ordered to resume the quinine at eight o'clock in the morning.

18. Vespere. Has had no return of the disease; says he feels comfortable, and free from all complaint but weakness.

19. The same as yesterday; has reduced the quinine to twenty grains, and taken some castor oil to move his bowels.

20. Continues well; to continue the use of the quinine and castor oil.

24. The same, in all respects, as last report. Ordered to continue the medicine thrice in the day, in doses of four grains.

28. Says he is perfectly recovered, and wishes to have his discharge, which was given him; he was desired to continue the use of the remedy for a week longer.

May 14, 1829.

ON THE IMPORTANCE OF BOTANY TO THE MEDICAL PRACTITIONER.

By WILLIAM HOWISON, M.D.

WITHIN the last year, botany (under the name of medical botany) has been added to the regulations of the Royal College of Surgeons of London, Apothecaries' Company, &c., in conjunction with materia medica. The intention of this paper is to show the impropriety and folly of such a regulation, by proving that botany cannot be, nor ever was, properly taught in the above way,

in London, where a course of lectures embracing medical botany and materia medica, only extends to three months. Materia medica alone ought properly to take up the whole period, consequently no time can be spared for botany. In Edinburgh, where the course extends from five to six months, materia medica, pharmacy, and dietetics, are all included; consequently the same remark must be made. I have now taught materia medica and practical pharmacy for eight years in Edinburgh, and I feel every year more and more convinced of the propriety and the necessity of confining my attention entirely to practical pharmacy and materia medica during that period, excluding botany and dietetics entirely, and have accordingly done so of late. Were I doing otherwise, and introducing medical botany, I would not benefit the student ignorant of general botany, in the slightest degree, and must make a jumble and confusion of the whole.

How, I would ask, is a medical student to be taught medical botany, if he be entirely ignorant of general botany, which more than three-fourths of them are! What is he to benefit by being told, in describing conium maculatum, or hemlock, that it belongs to the umbelliferæ of Jussieu, or to the pentandria digynia of Linnæus, if he be ignorant of the nature of the calyx, corolla, &c., of the Linnæan and Jussieuer arrangements? Any man acquainted with general botany must be aware, that it is a science so extensive, as not to be acquired in a shorter period than from three to six months, with the greatest industry, opportunity, and attention, and that medical botany is merely a more advanced branch, detached from it as a whole. The individuals who introduced the regulations now complained of, never were enthusiastic or proper botanists; and their having done so in such a careless manner, is sufficient proof of this! Every medical man ought to know general and medical botany as an interesting part of his profession, and he can only acquire that knowledge by attending diligently and attentively one or more courses of general botany of three months' duration. Every medical officer entering the army, navy, or public service of his country, where he possesses ample opportunities of moving from place to place over the earth's surface, ought to know intimately general botany, as putting it in his power to benefit the human race, and to employ his spare hours to advantage. The carrying this improvement into effect, lies with the different public medical bodies, the army and navy medical boards, by abolishing from their regulations medical botany, as it at present stands connected with materia medica, and insisting upon every student attending a course of general botany of at least three months' duration, previous to his obtaining his diploma or liberty to practise.

9, Nicolson Square, March 15, 1829.

POST-MORTEM EXAMINATIONS AT ST. BARTHOLOMEW'S.

To the Editor of THE LANCET.

SIR,—As so much trouble has already been caused you about the *post-mortem* examinations at St. Bartholomew's Hospital, I shall merely take the liberty of asking, whether you consider it fair, that all the *most interesting* cases (of one of the surgeons) should be examined at so early an hour as seven o'clock in the morning, without any previous notice having been given to the pupils, as they must then lose that shadow of a chance of hearing of them, which they possess when the examinations are conducted in the middle of the day?

I have the honour to be, Sir,
Your obedient servant,
A PUPIL.

St. Bartholomew's Hospital, May 30.

PROPOSED REMEDY FOR GIBRALTAR FEVER,

AT a late conversazione at the College of Physicians, a paper, by Mr. P. Jeffrey, who has long resided at Gibraltar, was read, on the prevention of fever at that fortress. Mr. Jeffrey attributes the fever to the bad construction of the drains of the fortress, and suggests the establishment of a steam engine at Europa point, for pumping up a supply of water into a reservoir to be formed in the rock above the town, having the drains so constructed, that the water contained in the reservoir might, every night, completely cleanse out their contents. At present they are allowed to remain quiet for some days, which, owing to the excessive heat of the sun, occasions dreadful smells. The plan has been under the notice of three persons connected with government, and is regarded with considerable approbation. Mr. Jeffrey argues that the vapour arising from the drains and cesspools is the operating cause of the fever. Fresh water is very dear at the fortress; and the only mode of obtaining salt water for the purpose of cleansing the place, would be by the means suggested.

THE LANCET.

London, Saturday, June 13, 1829.

Truth and justice have prevailed—the Anatomy Bill no longer disgraces the table of either House of Parliament, nor outrages the feelings of the profession and the public, by its iniquitous and impolitic provisions. The moment we perused this Bill, we expected that this would be its fate, and have repeatedly expressed our conviction to that effect in the pages of this Journal. The petition to the House of Lords, which we published last week, was presented on Friday evening, just before the second reading of the Bill was moved. It was laid before the Right Honourable House by the Earl of Harewood; and to the zeal and love of justice of this excellent Nobleman, we are indebted for its having been *read at length*, a mark of distinction which no other Petition against this Bill has received. From some gentlemen who were below the bar, we have learned that its contents produced a very powerful sensation throughout the House, and we have the best reasons for believing, that the silence of those who had previously advocated the measure, (Lord Lauderdale for one,) was occasioned by the "new lights" which burst upon their Lordships, relative to the monopoly of the College of Surgeons, in producing the difficulties opposed to the cultivation of the science of anatomy. The House was not even divided on the Bill, and with the exception of Lord Calthorpe, who moved the third reading, not a word was uttered by any noble Lord in favour of this impolitic measure. We certainly regret that Parliament is about to be prorogued, without having passed a Bill, having for its object the prevention of such horrid crimes as were last year committed in Edinburgh; and if the measure recently before the House had been in any way calculated to promote so desirable an end, we should have passed over many objectionable provisions in silence. For surely that community cannot be in a very happy or in a very secure condition, the members of which hourly run the risk of being murdered, that their bodies may be disposed of to some trading and mercenary anatomist, for four or five pounds. This, we say, cannot be a very enviable state of society, but we are thoroughly persuaded, that it would not have been improved by the passing of the Anatomy Bill.

It afforded us great pleasure to perceive, that the Marquis of Lansdowne in the course of the debate gave notice, that should a Bill for regulating schools of anatomy be introduced into the House during the next session of Parliament, that he would move the repeal of the statute which consigns the bodies of murderers to dissection. This and the total prevention of the *sale* of human bodies, must be the first steps towards any Act which will be sanctioned by the public, or which can have the effect of facilitating the study of anatomy, or of securing them against the daggers of assassins. Before the opening of the next session of Parliament, we shall repeatedly discuss this subject, and, we hope, until every member of the legislature shall have acquired a full knowledge of the share which the London College of Surgeons has had, not only in creating the obstacles of which the profession has complained, but also in the commission of the Edinburgh murders. The members of the Council, morally, are scarcely less guilty than the atrocious Burke, and at a public meeting in the autumn, they may, probably, have an opportunity of learning the opinion of their professional brethren on this subject.

An attempt is making to obtain for Mr. Bransby Cooper the title of F.R.S. His certificate is signed by Sir H. Halford, Cockney Mayo, Dub Mansfield Clarke, Little Brodie, and two or three other persons of the same stamp! What next?

Questions proposed to the Class of Practical Anatomy, with the Answers returned by the Four most distinguished Students, at the Examinations held in the University of London, for the Session 1828-9. London. Taylor. 1829. Crown 8vo. pp. 48.

Few will be disposed to deny the advantages which must ever result from bestowing upon pupils of talent and industry prizes and honours, in all large medical schools. But the manner in which many of the examinations for these marks of distinction are instituted, completely perverts the principle upon which rewards should be conferred. In many of our schools, medals and other prizes are mere baits thrown out by the lecturers to catch the pupils' fees, and students on hearing that prizes are easily obtained in a particular school, become anxious to enter there, in the expectation that with very little exertion they will be enabled to obtain, if not the highest rewards, some minor prize or mark of honour. It becomes, therefore, matter of great public importance, if distinctions are to be conferred upon particular students, that their claims to such distinctions should be made known. Otherwise, idle and incompetent teachers may puff themselves into notoriety, and, at the same time, send before the public an inferior class of practitioners, bedecked with gold and silver medals, and honorary diplomas. To render, therefore, the possessors of such prizes worthy of respect and confidence, the examinations should be in public, and the examiners and arbiters should not be the professors themselves, but should consist of gentlemen altogether unconnected with the classes. Further, the prizes should not be numerous, because their value will always be in the direct ratio of their scarcity and the difficulty of obtaining them. Honours thus won and awarded, will always mark their possessors as objects of respect. But bestowed as they now are in many of our schools, they render the pupils who obtain them subjects of ridicule, and the lecturers who give them objects of scandal and reproach. It is, therefore, with the highest satisfaction, that we have seen the little volume now put forth by Mr. Bennett. It is at once a proof of his talents and honesty.

As we gave a full account, in No. 300, of the manner in which prizes were awarded at the London University, and the names of the successful candidates, we shall only extract the eighth question and answer, for the first silver medal, obtained by Mr. Benjamin Phillips of Monmouthshire.

Question 8.—*The anatomy of the duodenum.*

Answer.—The duodenum is the commencement of the small intestines, succeeding immediately to the stomach, lying concealed by the transverse mesocolon. It is divided into three portions: the first, about two inches long, commences at the pylorus, passes horizontally backwards and to the right, and near the neck of the gall-bladder forms an angle with the second, which descends vertically, and ends near the third lumbar vertebra; the third, continuous, passes transversely to the left, and before the vertebral column, towards the superior extremity of the mesentery. In this course it forms a semicircle, which embraces the head of the pancreas. The first portion has, more or less in front of t, the liver, gall-bladder, and transverse colon. The second, or perpendicular portion, has in front the ascending colon, and behind it the right kidney and its vessels. The third portion is crossed in front by the superior mesenteric artery and vein, which separate it from the pancreas, and behind it has the vena cava, aorta, and vertebral column. Its inner surface is mucous like the stomach, having many curved folds (the valvulæ conniventes) formed by the inflection of the mucous membrane. At the point of union of the second and the third portions is a small tubercle, at whose summit are seen the united or isolated orifices of the biliary and pancreatic ducts. The duodenum is not completely invested with serous membrane. Its muscular coat is thick, nearly all the fibres being transverse like those of the stomach.

As this answer may be taken as a pretty fair specimen of the whole, the public can appreciate the impartiality and discernment of the different professors in awarding the prizes.

CASE OF HYDROPHOBIA.

Communicated by Charles Brady, *Esq.*

——— Edwards, aged 45, a dealer in dogs, was bitten on the morning of the 10th of April last, by a dog to which he had been giving aperient medicine, and came to me for the purpose of having the wound cauterised.

On inquiring into the circumstances, it appeared that he had been extensively connected with a trade in these animals the greater part of his life, had been frequently bitten, had often seen dogs in a rabid state, and, consequently, had many opportunities of knowing their various states and conditions of health. In the present case, he positively affirmed that the dog was neither rabid nor viciously inclined, but that he had been accidentally bitten by the dog, while making an effort to close its mouth after the administration of a dose of salts. He consequently refused to allow me to excise the bitten part, which I was very anxious to do. I therefore saturated the part with strong nitric acid, to produce sloughing, and destroy any virus which might have been communicated.

I afterwards saw the dog. It was labouring under pain and uneasiness, from frequent efforts to void fæces; this it shortly did, and immediately devoured them. He also took oil and food, with greediness. On the patient's (his master) speaking to the dog, the animal fawned on him, and appeared in no way vicious. The eyes were slightly turgid; but, on the next day, this was gone; the animal lay quiet, walked firmly, breathed easily, showed no saliva, had drunk, evacuated, and showed not the slightest symptoms of rabies. In the evening he died, without apparent pain, and knew, and caressed his master to the last moment. On examination, the stomach presented its natural appearances; there were a few ends of straw present, there was neither turgidity nor inflammation; the duodenum was impacted with black fæces of a purely stercoraceous nature. Under all the circumstances, I came to the conclusion, that the animal was not rabid, and that his death had been occasioned by constipation. His master said, it was not unusual for dogs to die in the same way. The interest of the case is enhanced by the doubt there exists, whether the dog laboured under hydrophobia or not.

On Wednesday, the 27th of May, at 6 P.M., forty-seven days after the accident, the man came to my house in the greatest anxiety, and stated, that it was all over with him, that his hand and arm had been greatly pained the day previous, that he had had cold sweats during the night, and felt chilly now, and could not drink water without spasm and fear, though thirsty. I requested him immediately to return home, and in a few minutes I saw him, with Mr. Shea of Great Charlotte-street. We presented him with a little salts dissolved in water, which he was obliged to quaff very precipitately, experiencing for a few seconds much spasmodic action. He then resumed a quiet manner and conversed rationally, repeatedly saying, as he continued to say throughout, that he should be much better if he could be sick.

The symptoms were now of too unequivocal a nature to admit of a doubt of their arising from hydrophobia. Anxiety of countenance, rapidity of motion, spasm of the pharynx, rigours and stertorous breathing, were very marked; the pulse small, feeble, slightly remittent, and 76. Three grains of calomel, and one of opium, with one ounce of castor oil, were administered. At 9 P.M., I found him in a comatose state, waking at short intervals. I had then seen Mr. Callaway, who wished him to enter the hospital immediately, and on a promise that he should not be left there, he consented to go. Drs. Bright and Addison now saw him with Mr. Callaway, who all concurred in opinion as to the cause. He was ordered to be cupped to ten ounces, a belladonna plaster to the scrobiculus cordis, an enema, with tincture opium, two drachms—tincture asafœtida, half an ounce—sulphuric ether, half a drachm, every three hours. A suppository with four grains of opium, and five grains sulphate of zinc, to be kept in the rectum.

At 2 P.M. a second consultation was held; the sufferer's case had become decidedly aggravated; his sickness and desire to throw up mucus from the larynx increased; at seeing or hearing fluids, the spasms returned; his pulse 100, and intermittent; his countenance wretchedly anxious; bowels slightly relaxed; tongue less white than in the morning; on suddenly rising in the bed, or making exertion, the spasms returned; the interval between the paroxysms shortened; the pain at the scrobiculus cordis violent. The enemata and suppositories on being administered, almost instantaneously came away. He had not submitted to them long, before his temper became exasperated, which rendered it impracticable to continue their use sufficiently long to expect any advantage to follow. It is worthy of remark, that the wretched sufferer could sit for a minute or two, at this time, without being incommoded by the free current of air from the open window.

At 5 o'clock, Dr. Bright, Dr. Addison, and Mr. Callaway again met, when the patient's sufferings were truly appalling, his pulse 109, and intermittent, the four quarters of a minute being, 32, 28, 25, 24. Dr. Bright suggested the propriety of inducing local inflammation in the part, by making an incision, and inserting cantharides, to which Mr. Callaway acceded, and without delay proposed it to the wretched sufferer, who, however, peremptorily refused submitting to the operation. The pure kali was then proposed as a substitute, but this he also violently refused. Two drachms more of tincture of opium, were ordered to be added to each enema. And, in order to render the

suppositories less stimulating, the zinc was discontinued, and each suppository composed of six grains of opium. A consultation was again appointed for nine, but he could not be prevailed upon to see any of his medical attendants, except Mr. Callaway. His pulse had risen to 120, and was intermittent, with peculiar expression of countenance. At 3 A.M. of Thursday, the phrenzy had reached a height at which he could not be soothed, even by his wife and sister, whom he severally attempted to injure by blows; their affection and firmness, however, eventually overcame his rage. At half past 3, he inquired for Mr. Callaway, who, upon being called up, immediately attended, and soothed the unhappy sufferer's mind, and continued to do so by his presence until 5, when he left, the pulse of the deceased being then so rapid, as to render it difficult to count it. From this time, his miseries increased; Mr. Callaway called again at 7, but did not get admitted; in this state the poor fellow continued with scarcely any intermission until half past 10, when death terminated his sufferings.

I am informed by Mr. Callaway, that shortly before his arrival, on the morning of Thursday, the deceased's sexual propensities had led him to express himself very lasciviously.

Charlotte-street, Blackfriars,
June 3, 1829.

THE MEDICAL AND PHYSICAL JOURNAL.

THE last Number of this melancholy magazine exhibited a glaring instance of "the scant measure that is abominable," and this fact we took an early occasion of hinting to the editors. The case appeared the more flagrant, because the measure was leanness itself in quality, as well as quantity. Our hint on the subject, however, has not passed unheeded, for Mr. Souter, sensible of the injustice of charging half a crown for half a dozen pages of bald matter called "original papers," though a large parcel of reprint may at the same time be thrown into the scale, has this month sent forth a number, at least two-thirds of which its purchasers have not paid for before in some other shape.

But, as experience has taught us that mere appearances are deceptive, and that, whatever show it may make, the *Yellow* Journal is not every month a *golden* treasure; that this publication, as in the reign of RODERICK MACLEOD, has often borne a close resemblance to the money of Lycurgus, the weight and value of which were out of all proportion; we shall take the liberty, without further preface, of examining its contents, and ascertaining what the little band of three, (for Dr. Webster's elegant and grammatical second-hand "observations" hardly entitle him to rank as a fourth,) have just contributed towards supporting the character of that work which the unfortunate RODERICK so effectually ruined in the eyes of "the faculty in Europe and America."

We are induced to pass over for the present the paper on the medical schools of Italy, for the sake of a few words on the subject of the second, "*Observations and Experiments on Mesmerism*," which professes to be written by Mr. RICHARD CHENEVIX, a gentleman who is not a member of the profession, but "a fellow of the Royal Society," in which body, we fear, the philosophers are fewer than they ought to be. The subject of Mesmerism has been tied to the tail of Mr. CHENEVIX on the other side of the water, by some French wags, who pretend that they believe in the doctrine (if it be not an abuse of language to dignify such an art with the name,) and we suppose that, like a dog with a tin kettle, or the wild bull of Thebes with Dirce at his tail, Mr. C. will drag this "mesmerism" about, till one of the two, Mr. C. or the subject, (and heaven long preserve the life of the former,) gives up the ghost. It would be perfectly in character with the paper to treat the whole as a joke, which was too good to be spoiled; but this is No. 2 on the same topic, and has been prefaced by another, with which Mr. CHENEVIX rushed into the presence of the sedate public two months since, exclaiming in a voice that, coming from St. Paul's Churchyard, might have been heard in Hyde Park, "Mesmerism is true, is true! Mesmerism is true! Rejoice ye sick, ye maimed, ye bilious, ye blind, and ye deaf, it is true, every word!"

We cannot, in reason, expect such of our readers as are under three or four score years of age, to understand what is meant by the term "mesmerism;" but those who have arrived at this venerable period of life, will probably call to mind some particulars of the birth and progress of a mania which raged for a time in their youth under the name of animal magnetism, an importation from the French capital, after it had been kicked out of every other city on the continent, and was finally knocked on the head in England, in consequence of a patient and most careful investigation into its claims, by a committee of the first philosophers and physicians living. For the benefit of those, however, whose hairs time has not yet silvered, we will state here what mesmerism is, an explanation which is the more neces-

sary, because Mr. Chenevix has not dared—we say has not *dared*—to give one in either of his papers. There is good reason why he should not have done so. There are no words in which he could have framed an explanation, which, thrown into sentences, would have been tolerated, even by his own ear, for one moment, as fit language for a man of science, and the days of alchemy and astrology must return, before he could frame them for the ears of others.

What notion was meant to be conveyed by the term animal magnetism, when it first arose, may be very shortly stated; and we will give it from the explanation of the greatest juggler that ever dabbled in the art. He supposed that matter and space were pervaded by an invisible fluid, of a different kind from any of which philosophy had hitherto taken account. This fluid was denominated magnetism, and was said to possess a peculiar, indefinite, inexplicable, supernatural, magical, spiritual, etherial sort of influence over all things, and that such mountebanks as himself possessed the power of calling it into action, and rendering it subservient to the benefit of the sick and the sore. It happened that though these fellows could magnetise, indifferently, whatever came in their way, whether the object was a pig, a tree, or a handsaw, yet human beings were the grand subjects of their operations, (for neither pegs nor posts possessed purses,) and therefore the magnetism came to be called *animal* magnetism. Further: the agents by which the jugglers professed to direct this influence, were such things as mirrors, reflectors, celestinas, and wands, and a presenting and waving of hands after the manner of bottle imps, as was lately to be seen at the English Opera House; and, finally, because the name of one of the great magnetic conjurors was "Mesmer," and in order to disguise if possible the old absurdity by a new phrase, animal magnetism is now called mesmerism.

In estimating the value of this art, it is impossible to state the principles upon which it is founded, in more definite terms than these. If Mr. Chenevix himself were asked, "what is mesmerism?" he would probably tell you that it was "a sympathy." If you wished to know of what kind was the sympathy, he would very likely mention the words magnetic—attraction—nervous action—and throw himself into the attitude of a fugleman at morning parade. If you endeavoured to obtain further information, he would possibly tell you that it was connected with some action of the mind of a mysterious kind, not to be taught or learned, but to be found out or unwittingly acquired; and if, convinced that there really might be something in the doctrine, you told him, that evidence being the great criterion and sure mark of truth, you should like to have some proof of the existence of this sympathy and man's dominion over it, he would possibly take you before that unhappy dyspeptic JEMMY JOHNSTONE, author of the Medico-Fudgico-Piratico, and in your presence mesmerise Jemmy's bilious noddle, with the same results that you would yourself produce by administering a full box of Mr. P. Pettigrew's ipecacuanha lozenges. Search Mr. CHENEVIX's two papers through, and see how much more light he has thrown upon the subject than this; note how many of the secrets of the art he has disclosed. The mason is not more quiet as to the proceedings of his lodge, nor the privy council of its cabinets, nor a jury of its conferences, than Mr. CHENEVIX on the only point which can give sane men an opportunity of deciding upon his claims to their confidence.

In these remarks, there is nothing harsh or unmerited. We may know, under the rose, pretty well what is the composition of a remedy—yet, if the practitioner make it a secret, he must be called a quack. Mr. CHENEVIX puts his subject forward, and keeps its nature back designedly. What shall he be called? We should be sorry to reply, without having sufficient cause for doing so, if the answer be to his disadvantage. We will therefore give our readers a fair opportunity of deciding. We shall not quote largely in doing this, as the production of a very few sentences must settle the question; these we shall take from the second of the papers, the two being quite of a piece, and neither of them redeeming the other from the charges which may be brought against either.

It is not to be denied that to a person unacquainted with the subject, the statements of Mr. Chenevix, or of any other mesmeriser, are such as would excite in him a certain degree of curiosity; and bearing in mind the professed object of the author, the importance which he attaches to an universal belief in mesmerism, and the anxiety he evinces to create a public interest in it, the first thing a reader would expect to find, is a distinct explanation of the word mesmerism; for on his knowledge of that, ought the basis of his faith to rest. A first reading of the paper, however, affords him so little idea on the subject, that he begins it again. But the second reading excites his suspicion, that he is not to be made as clever as Mr. CHENEVIX on such easy terms. Doubting, however, that he may be dull, he examines every word that can possibly furnish him with a key, but the writer is too wary for him, and rings such a change of terms upon the word mesmerism, whenever he is pushed for a phrase which will enable him to

preserve the thread of his discourse, without furnishing a clue to the art of the mesmeriser—that he sees, it is quite clear, nothing can be gained by pursuing them. The mysterious thing is by turns denominated "an agent—an influence—an art—an application—an experiment—an investigation—an operation—a practice—a treatment—a proceeding—a trial—a science—a phenomenon—a means—a magnetising—a concentrating of mind—a passing of the hands—a new branch of knowledge—a therapeutic—a doctrine—a question"—and, it, it, it, that unlucky pronoun, whenever it can be thrown in to avoid "the too frequent repetition of some noun."

It is of no avail, then, to go to the *parts* of Mr. Chenevix's sentences for the information which is so desirable, and at the retention of which he seemeth to be so profound an adept; resort must be had to the sentences themselves. Surely, in them, he will address the profession in a manner suitable to a man of science, and a fellow of three or four royal societies. It is soon clear, however, that it is not many of these which are trusted with direct reference to the art; few as they are, however, let us have them, and see if they be, on examination, as curious as they promise. Here is a rare bit of writing in the first sentence. If affectation of candour and pure humbug were ever united at all, they are united here. "It is by no means," he starts with saying, "the desire of those who are convinced of the truth of mesmerism, to urge belief upon their mere assertion, but to excite curiosity, to turn the public mind towards this powerful agent, so true, yet so much despised, and to engage some inquirers to lay aside their preconceptions for a moment, and have recourse to fair experiment."

To *fair experiment*, Mr. Chenevix? Is it possible that you write thus, and yet that throughout the whole of your papers you do not let fall one single syllable, which shall enable any person to make the very trial, which you say is the only ground that you possess for confidence. We lay aside the mystical terms in which the whole sentence is written, though it is by no means a bad specimen of the new style, or we should find as much to admire in it, as would occupy a volume of comment. It is for instance, so shrewd to say that mesmerism is true, "this powerful agent is so true." Geometry is true; caloric is true; alkalies are true; pneumatics are true; poetry is true! But your intreaty, that inquirers would make experiment of the art is excellent. Suppose for a moment, that you were perusing an essay by Galileo, who told you, that air possessed weight, or of Pascal, who assured you that it possessed elasticity, or of Black, who affirmed that it would unite with metals, and was an universal agent, which was "true." And suppose that Messrs. Galileo, Pascal, and Black, though they were fully aware that you knew nothing of the atmosphere, or the air-pump, or combustion and attraction, enjoined you to lay aside your ignorance for a moment, and have recourse to fair experiment, in order that you might be satisfied of the truth of these statements, become a wiser man, and science be advanced by an addition to the number of her disciples. Imagine this, and that they then left the subject, without a syllable on the nature of the apparatus with which alone the experiments could be made, or the mode in which they must be conducted. For what should you set these men down?

With this cry of "experiment" does Mr. Chevenix not only set out, but conclude. He makes at the close, a second appeal to his hearers. "By experiment let the truth be told. Let any twelve men in England, devote twelve half hours each to experiment, *secundum artem*, and then let them relate the issue." And under the cover of a phrase which the writer would not translate into the only English words that it will bear, does Mr. Chevenix endeavour at once to exhibit a specimen of his candour, and hide the experiment, which is on the verge of meeting the day-light that must expose it. If mesmerism were truth itself, it would be shamed by such a disciple.

Mr. Chenevix has his pupils, and it was just possible, that if they spoke of the art, the "experiment" might be betrayed. Observe, however, how faithful a set of disciples he has contrived to make them, and how cautiously they have been enjoined to speak in the letters which he ventures to make public. One of the disciples is a Dr. Cotter, of Ballynacarig, in Ireland. He is induced to write to his tutor, acquainting him with a cure which he supposes he has effected by mesmerism. What was the course he pursued? "I proceeded to *try my hand* at mesmerism, in *imitation* of what I had seen you do. After some time, the patient grew quiet. With the hope of *exciting the stomach to action*, I directed my attention particularly to the epigastric region." Continuing this for two or three minutes, the man vomited an immense quantity of liquid. By and by his bowels were confined, and "I again had recourse to mesmerism with the same good effect." And there Dr. Cotter quits the dangerous subject. A Mr. Levinge then states a case in which all he can be persuaded to say of the "experiments" is, that he also "directed his attention to those parts," the head, belly, and legs, and gave the patient mesmerised water to drink, a quart every day, but not a word falls out to disclose what mesmerised water is. Then there is a patient

to be mesmerised who is touched with insanity, and of the "experiment" it is stated, that every time the relater drew his hands before the patient, she felt "life going down through her body along with them." Then, in another case, it is observed that the symptoms showed themselves "in one minute after the *operation* began," and that a state of calmness was produced as soon as the *passes* commenced. That the *trials* never exceeded so and so. Then a patient writes that he felt very sensibly affected by the *mesmerism*, and so, on it runs to the end of the chapter.

We are not disposed to carry the exposure much further. Mr. Chenevix must, before long, have ample means of ascertaining whether this is, or is not, "the country whose duty it is to expose the imposture," though it is almost too bad to tax the patience of the public by any attempt to appeal from the "eternal quietus which was given to the science" by the report of Franklin and his coadjutors. Let it, however, continue to be borne in mind, that through the credulity of the people of this country and France, the conjuror Deslon realised a fortune of a hundred thousand pounds, by means of an art which was pronounced, after a most elaborate investigation by the first philosophers of the day, as a wretched and disgraceful piece of deception.

ON VISION.

Of all the mysterious problems in nature, perhaps none appear more paradoxical than some of those which relate to the organ of vision. Such is their distinguished singularity, that they seem to mock the mind with contradictions, or even to reverse the very laws of nature. But while we are assured that these are eternally immutable, it must ever be a maxim with the votaries of science, that it is ignorance alone which creates anomalies, and that every effect, whether plain or mysterious, is equally the result of a palpable principle. Nature is ever consistent: and whenever she exhibits the semblance of error, it is the laudable ambition of the human understanding to prove her congruity.

The following phenomena have often been the subject of curious speculation. Many theories are taught to explain them, yet none has been hitherto fairly established. The two former have excited especial attention, but the latter are certainly no less remarkable.

1. Although the animal race is endowed with plurality of optical organs, and though light from a visible object portrays an image on the retina of each, nevertheless we remark an unity of perception.

2. While every visible object is perceived in its actual position, it is always the converse of the image on the retina.

3. Although it is evident that every image is modified to the curve of the retina, yet every near body seems straight or crooked, convex or concave, according to the true figure of its presenting disc.

4. The retina itself is confined to a mere iota of space; yet from this small tablet is conceived, not only the most minute objects, but also the majesty of greatness and grandeur.

Singleness of vision is not unfrequently attributed to unknown agency, to some peculiar nervous conformation, or rather distribution; but if we acknowledge a peculiar nervous distribution to prevent double vision, must we not allow that a like provision exists to *prevent double sound?* Again, if it be confessed that the parts of the retina which correspond in structure correspond in function, that theory which supposes corresponding parts of the retinæ may be easily confuted. Now it is argued, that when a person whose sight is perfect, looks directly at an object, the axes of both eyes are inclined towards each other, and then the images are formed on corresponding points of the retinæ, and hence single vision must result. Let the reader try the following experiment. The eyes being directed on any distant object, cause any other small body to intervene, at a very short distance (the finger may be held a few inches distant); the axes of the eyes may be still towards the distant object, while attention is given to that which is near; the effect will be, that the distant object will appear single, and the near one double. Now, although the axes of the eyes do not correspond in direction with the nearer object, every optician will allow, that its images are formed on parts of the retinæ, which correspond as precisely as those parts which are found to correspond with the axes of the eyes. Now, let it be observed, that this is an example of double vision, which is not produced by any obliquity of the visual organs, but the axes of the eyes do not meet on the object, and this is alone sufficient to produce double vision.

Then if the physiologist affirm, that so long as the images of an object are disposed on corresponding points of the retinæ, single vision must result, his doctrine is erroneous. Nevertheless it is true, that when the axes of the eyes correspond, and single vision is effected, correspondence in the visual parts of the retinæ is also observed. Now these arguments tend to prove, that mere correspondence of the parts of the retinæ will not account for singleness of vision.

The apprehension of an external object, through the medium of light, is the peculiar

characteristic of the visual sense. We are, by nature, totally unconscious of possessing a retina, and equally unaware, when an object is seen, of its image existing at the bottom of the eye. Hence the faculty of vision ought never to be confounded with the sense of touch. All visible bodies appear in a right line of direction upon the point of the retina on which they are impressed, before the faculty exists of recognising distance. All the above problems of vision may be readily reduced to this well-known principle, which is, in reality, the peculiar characteristic of the ocular sense; but philosophers have not considered the effects as analogous, and resulting from a common or identical cause. Singleness of vision, and the inversion of optical images, are subjects which have ever been distinctly studied, and different theories adduced in explanation of each.

On Single and Double Vision.

In the above experiment we observed, that the distant object appeared single, while the axes of the eyes corresponded in direction; the near object appeared double. Now, as a reason why the distant object appears single, we may argue that the direction of an object must always be conceived with relation to the position of either of the eyes, independently of the other; and, therefore, for the same reason that the distant object appears single, the near object appears double. Repeat the experiment, and then close one of the eyes, and the image of the near object will of course appear on that side of the open eye at which it really exists; but reverse the eyes, i.e. close that which was open and open that which was shut, and the axes of the eyes, being still directed on a distant object, the near object will appear to change sides, and thus, as the eyes are open and shut alternately, the near object will appear to pass from right to left and from left to right. Now this is an illusion, but it is not connected with functional aberration, neither does the double conception, when both eyes are open, prove either eye in fault; on the contrary, the functions of either eye being wholly independent of the other, each truly represents the position of the object; but the object is held to the right of the axis of one eye and to the left of the axis of the other; and hence, as the *object is in reality* on two opposite sides, it must appear double. These arguments will apply in every example of double vision, however produced.

On the inverted position of the Image, with regard to the object.

Now the above explanation of single and double vision, is grounded on the fact, that the visible object appears in the line of direction from the image; this effect is the *sine qua non* of vision. It is for this reason, that if an animal were gifted with a thousand eyes, and their respective axes were truly adjusted to a visible object, and as many images correctly applied on their sensitive retinæ, singleness of vision would still be preserved, for it is plain, that only one image could be seen in the same direction. So, also, it is for the same reason, that when, as is seen in the above experiment, an image is found on the right side of the eye, it appears to the left, and *vice versa*. Again: the same law of direction which applies to the relative situations of objects with regard to the images, and to all the phenomena of single and double vision, will apply to every component part of any image *ad infinitum*. Hence we may perceive, not only the physical cause for the inversion of images, but also for the reverse disposition of their every individual part.

On the estimation of the size and figure of Bodies.

It is evident that the knowledge of the actual figure and magnitude of bodies cannot be conveyed to the novice in vision, through the medium of light. Nevertheless, it has been a question of dispute among the learned, whether a mere tyro in the visual art could distinguish the figures of surrounding bodies, as for example, whether they would know a convex from a flat surface, the bodies being considered, in other respects, equal. The true answer will be in the affirmative: he would certainly see a difference, but he could not appreciate the cause, neither could he tell which was the convex or which the plain object. So, also, he would judge rightly of their relative proportion, not only with regard to each other, but also with relation to surrounding objects if equally near; but of the proportions of promiscuous bodies, their relative and actual sizes and shapes, his conceptions would be utterly vague or fallacious; in a word, he would not be enabled to estimate distance, nor allow for its effects on the visual image; yet were it not for the inherent influence of the law of direction, experience could not teach us to estimate distance: not only duplicity of vision and inversion of objects would inevitably occur, but every object would appear of the same limited size, of the same actual figure, and in the same contiguous position as the image on the retina.

Here the writer may add, in conclusion, that some time ago he published other essays on the subject of vision, wherein he contended, that all objects which are seen beyond the point of distinct vision will always form their images at the same focal distance, and hence showed the non-neces-

sity of ocular adjustment. Other important points of optical physiology he also endeavoured to illustrate. Whatever have been the defects of his essays, the subject is one of ineffable interest, and not only so to the mere physiologist, but also to the general philosopher, and if it tend to involve the mind in metaphysical perplexities, it secures to the author the indulgence of the wise. Physiology is the noblest of sciences, and every department of animated nature teems with intellectual delight. All we behold is perfection and beauty, from the first simple dawn of vegetation, or vital evolution, to the glorious development of man. So also in each particular organ of the vitalised frame, we trace the operation of infallible laws. But the eye is an organ of pre-eminent interest, being no less beautiful in its structure than sublime in its functions: it is the greatest ornament of the being, and affords the greatest charms to existence. Like a mirror, it reflects every moral and every mental impression; to the soul it would seem a pavilion—to nature an universal oracle; and must ever be regarded with wonder and admiration.

T. Williams.

HOTEL-DIEU.

EXTENSIVE WOUND OF THE NECK.

On the 4th of April, 1829, a young man was admitted, who, on the day previous, had made an attempt to destroy himself by cutting his throat; the wound extended from one side of the neck to the other; both the carotids were laid bare, but had not been wounded; the sterno and thyro-hyoid muscles and the thryro-hyoid ligament were divided, so that the upper part of the larynx was distinctly seen; the air passed through the wound, and speech was completely suspended, but returned immediately on closing the wound. For the latter purpose four sutures were applied, so as not to unite the edges completely, but only to keep them near each other. The patient, who had before the act swallowed about a pint of brandy, was, at the time of his admission, apparently not intoxicated, but delirious. M. Dupuytren observed, that in wounds of this kind the use of sutures was generally considered as contra indicated,* and that he, till within the last few years, had been of the same opinion; he had, however, seen so many cases of deep wounds of the neck, in which the free access of air to the wound, and the passage of the food through it, had caused the most violent inflammation and even danger of suffocation, so as to induce him to adopt an opposite plan; it will, moreover, he added, be found very difficult, if not impossible, to keep the edges of an extensive wound of the neck united by means of the bandage and position of the patient, as has hitherto been the general practice at the Hôtel-Dieu, which consisted in the application of a circular bandage round the chest and another round the head, united by strings, in such a manner as to keep the head drawn towards the chest, the thighs being, at the same time, kept bent upon the abdomen. This position, besides being extremely incommodious, is very often changed involuntarily, and can never be maintained in those cases where, as it often happens, the attempt at suicide is followed by delirium. These difficulties are obviated by the employment of sutures, which, however, M. Dupuytren remarked, it will be advisable not to draw too closely, in order to prevent the danger of an emphysematous swelling and the infiltration of the food.—*Lancette Française.*

* This was principally done by the authors of the Travaux de l'Académie Royale de Chirurgie.

ST. BARTHOLOMEW'S HOSPITAL.

SIMPLE, SUCCEEDED BY COMPOUND DISLOCATION FORWARDS, OF THE INFERIOR EXTREMITY OF THE TIBIA,

With Fracture of its posterior edge, Comminuted Fracture of the Fibula, Amputation of the Leg, and Death.

F. J. B. Lanigan, ætat. 53, was admitted, April 27th, into Harley's Ward, under the care of Mr. Earle, having sustained a severe injury to the parts connected with the right ancle-joint. States, that on the night of his admission, while walking along Cheapside, two men, *larking*, as he supposed, ran against him and knocked him off the pavement. As he fell, his right leg went under him, his ancle struck against the curb-stone, he was unable to get up and stand upon it, and accordingly was brought to the Hospital. On being admitted, there was found to be dislocation of the tibia forwards, and a comminuted fracture of the fibula. The muscles of the limb were acting spasmodically with great violence. The dislocation of the tibia was reduced, and the leg put up in splints. Twelve leeches to be applied to the part, and cold cloths.

28. Mr. Earle desired the splints to be removed, that he might examine the parts. The moment they were taken off, the spasmodic action of the muscles instantly dislocated the tibia again. Apply the splints again; leave the patient on his side; give

him hyd. sub. gr. iij., cum pulv. jal. gr. xviij.; take 18 ounces of blood from the arm, and administer 35 drops of the tincture of opium at bed time.

30. Let him have a compound senna draught immediately.

May 1. Feels rather feverish and restless. Take five grains of calomel, and half a grain of tartarised antimony immediately.

3. Last night was very restless; started up in his sleep, and not only again dislocated the tibia, but forced its extremity through the integuments, which had become thin and inclined to slough, thus making it compound. Inflammation and suppuration of the cellular tissue have taken place. The limb is considerably swelled; the muscles act spasmodically most powerfully, and the parts are in an extremely irritable condition. Mr. Earle has made an incision on the outside of the fibula, and also a small one in front of the tibia, at about the junction of its lower third, through which pus has been evacuated. It is with the utmost difficulty, when the reduction of the dislocated tibia is accomplished, that the end of the bone can be kept *in situ*. Mr. Earle wishes to remove the leg; and Messrs. Vincent and Lawrence, who have also seen it, concur in the propriety of proposing the operation. The patient refuses to submit to it. States, that there is nothing short of death that he will not cheerfully endure, rather than have the leg amputated. He is a native of Ireland, grey haired, rather of short stature, and of a somewhat spare habit. Has been an opulent merchant of considerable extent, but reduced in worldly circumstances by misfortunes. Of late has been gaining a livelihood as a tutor in private families. Since misfortunes overtook him, has been a hard drinker, and, indeed, was intoxicated when brought into the Hospital.

6. Still obstinately refuses to submit to the operation. Considerable œdema of the limb; inflammation not abated; great discharge from all the wounds; the spasmodic action of the muscles not in the least relaxed. Has this day been put upon one of the high fracture bedsteads, and the limb bound up in the most likely manner to command control over the action of the muscles, and keep the parts quiet. A poultice to be applied to the wounds, and cold cloths higher up the leg. Says he has a particular reason for objecting to amputation, but as that reason is a secret, he cannot disclose it.

8. The inflammation continues; sloughing going on; discharges freely. The inflammation does not seem disposed to extend up the leg. The integuments covering the muscles on the internal side of the leg more particularly, are actively sloughing. The pulse is good, and the tongue clean; rests well. The constitution is not suffering, and Mr. Earle is not now without hope. He is rather surprised that the constitution should not have begun to give way, but it seems to him, that the shock occasioned by serious mischief at the moment the injury is inflicted, is that which most generally proves destructive to the vital powers, as he has known several cases wherein the constitution, having been gradually prepared for extraordinary mischief, has borne up against it, whereas, had it occurred suddenly, it must have proved fatal.

10. The discharge from the different openings very profuse and offensive. There is still partial dislocation of the tibia, but which Mr. Earle, in the present condition of the patient, regards as unimportant. The action of the muscles appears to be now rather abated.

15. Diarrhœa came on a few days ago, which is continuing; the pulse is getting weaker, the tongue is brown, the suppurative process very active, and the discharge increasing in quantity. Has been informed, that the only chance of saving life is by getting rid of the limb, which he has at length consented to, therefore the operation is to be performed to morrow.

AMPUTATION.

At six minutes past one o'clock the patient was conveyed into the operating theatre, blindfolded, and upon the high bedstead on which he was placed on the 6th. When Mr. Stanley proceeded to apply the tourniquet, a soft swelling, about the size of a pullet's egg, was observed on the right groin. On being questioned respecting it, the patient said it frequently made its appearance, often disappeared, never produced any inconvenience, and was not to be attended to. At eleven minutes past one the operator commenced his circular incision, at from four to six inches below the knee. After the incision had been made, the integuments, particularly on the outer side over the fibula, from effusion of blood and the effects of subsided inflammation in the cellular tissue, were found closely adherent to the adjacent parts; Mr. Earle was, therefore, under the necessity of laying down his amputating knife and dissecting them back with a scalpel. This, with the subsequent division of the muscles, occupied three minutes. In ten minutes more the bones were sawn through, six vessels tied, and the stump covered over with the flap.

After cutting through the soft parts, they were not observed to retract, by any means, to the extent to which retraction is usual on such occasions; nor was that dexterity shown in their division which has been evinced by the operator in other amputations.

18. Two P.M. Since yesterday unfavourable symptoms have supervened. The patient has been restless and delirious during the night; his countenance is now pale and anxious: great oppression in breathing; cannot articulate but in a whisper; a tympanitic state of the abdomen; tongue brown in the middle; pulse 100; has been taking, occasionally, yesterday, through the night, and this morning, a little brandy and ammonia, but complains greatly of its making him sick and causing uneasiness in the stomach. On removing the dressings from the stump, not the slightest reparative process appears to be set up. Gangrene has attacked it at the outer edge, and where the adhesions of the integuments to the muscles were found to be firmest in the operation. A poultice, half bread and half linseed, to be laid over the stump. Mr. Earle suspects retention of urine from the state of the abdomen, and the patient now states, that formerly he was the subject of stricture of the urethra, but that it must be eleven years since he had an instrument passed. Mr. Earle has tried, for ten minutes, to pass a very small catheter, but cannot succeed; the prostate gland is very much enlarged and indurated. A false passage has some time ago been made into the bladder; the urethra is diseased. Not wishing to irritate more than is absolutely necessary, he has abandoned the attempt, requesting the dresser to watch narrowly the quantity of urine the patient may hereafter pass. He says he empties the bladder thoroughly and without difficulty. Ordered to continue taking brandy and ammonia, if possible.

Ten P.M. The breathing is less difficult, the pulse is much the same; he is more lively; he prefers table beer to brandy and water; he is occasionally rambling.

19, Eight A.M. The gangrenous appearance is rather extended; pulse weak, regular, and 94; tongue brown. Breathing again more difficult. Would only take the brandy and ammonia twice during the night. Entreats to have table beer in preference. Countenance anxious. No chance of recovery.

This morning Messrs. Earle and Stanley dissected the leg, when these appearances presented themselves:—the tibia dislocated forwards, with a small portion of its posterior edge fractured and retained *in situ*—considered perfectly novel. The fibula fractured into many pieces, and its extremity driven forward also, upon the astragulus. The internal latteral ligament in a sloughing state; the anterior capsule torn through; the cartilage of the upper surface of the astragulus absorbed. The external lateral ligament entire; the outer side of the fibula denuded of its periosteum for two inches and a half.

20. This morning, at a quarter past two, his sufferings were put an end to by that which he very much dreaded, death.

The sloughing and gangrene had extended to no considerable length, and the post-mortem examination elicited nothing particular. The liver was rather smaller and paler than usual, but healthy. The coats of the bladder very greatly thickened, and the urethra diseased: the organ empty.

REMOVAL OF CANCER OF THE LIP.

Samuel Goodyn, ætat. 63, was admitted into Darker's Ward, May 20, under the care of Mr. Earle, with an ulcerated cancerous affection of the lower lip. The patient, a brick-maker, a hardy, weather-beaten looking old man, states, that a very considerable time, as much as a year or two ago, the disease made its appearance in the form of a small pimple, and that it progressed slowly, till within the last two or three months. Since then it has become much larger and more inconvenient. It proceeds from the outer edge of the middle of the under lip, and extends down upon the parts covering the chin. The ulceration is about the length of, and broader than, an almond; the edges are indurated; the discharge very offensive, and the lancinating pains frequent. Has occasionally smoked, but never made it a habit. The glands under the chin are enlarged, one of them to the size of a damson. His general health is good, and he is willing to have the part removed with the knife.

23. Mr. Earle commenced the operation by making incisions downwards near to the angles of the lips, and in thirty seconds removed the whole affected portion. The edges of the wound he subsequently brought together by two hair-lip pins and one suture. One or two strips of adhesive plaster were laid over this, and the patient removed to bed.

After the operation, and the patient had been removed, Mr. Earle having cut open the removed portion and shown it, said to the gentlemen present, I owe it to you to make a few

Observations upon the Case.

The patient has considerable induration of the glands under the chin; and, therefore, it might appear to you that the operation has been undertaken improperly, the disease being a carcinomatous affection, in a state of ulceration, and it being well known that in many of these cases where the disease has extended to the glands in the neighbourhood, operations only put patients to unnecessary suffering—the cases terminating fatally. In the first place, however, as matter of expediency, it is desirable in some instances to obtain, in confirmed carcinoma, which sometimes, as on this occasion, is not

attended with very much suffering, the relief that is fairly to be expected from such an operation. In such case you institute a tractable for an intractable wound, and may often procure some years' relief. I would say, if that period of relief were considerably shorter, considering how much the patient's comfort is destroyed by the existence of the disease, I should conceive it right to perform such an operation as the present, and this even with the probability of the disease having extended to the neighbouring glands. But there are other circumstances that ought to be weighed. It has happened to me in many cases to have met this sort of disease upon the lip and prepuce, places where it is much exposed to irritation, and that irritation greatly increasing the malady. The case in which Mr. Lawrence operated last week, I may here observe, was one where the disease, I believe, began in the prepuce, and was afterwards greatly irritated by the flow of the urine. In such cases, the irritation induces hardness, and causes the affection to take on all the characters of carcinoma, without at all times being essentially true cancer. What I mean by that is, that many cases will do well by operation, and such, I trust, will be the result in the present instance, which you might be led to suppose were cases of true carcinoma, where the glands were diseased, and which would no doubt be fatal if allowed to go on. I have known cases where the glands have been enlarged at the time of the operation, but which afterwards became quiet, and subsided, the patients doing well. Many years ago a case of this kind happened to me, which I will relate, for I should be sorry that any one here should leave with an impression that I am anxious to perform operations that are not necessary, or that my example should lead any one else to such a line of conduct. A Mr. Webb, now residing at Blackheath, in the year 1816, came under my care for a similar affection of the lip to the one you have just seen. The affection there, however, had gone to a much greater extent; the diseased portion was hard and indurated around its edges, just like the present, but the angles of the lips were completely destroyed: it had all the characters of true carcinoma. The glands under the chin were enlarged to a great extent. He was between 60 and 70 years of age, and the case presented but very slight grounds of hope from an operation. I found, however, that though it would be necessary to take away an enormous portion, it would be possible to get the edges of the wound together, provided all the teeth in the lower jaw were removed, Nature having removed those of the upper. I proposed the operation, and he assented to it. I sent him to a dentist to get the teeth extracted, and requested him at the same time to take the opinion of other surgeons. Three of the most experienced surgeons to be met with negatived the operation. To his direct question they said they had nothing to propose, and that a painful death only could await him. He then determined to submit to the operation. Of course I performed it, assuring him that there was but a slight chance, and that if the wound did not heal, I should place him in a worse situation than that in which he stood before the operation. I removed an immense portion, applied four hair-lip pins, fed him through a hair-lip tube for 48 hours, and the case terminated well. The enlargement of the glands subsided, and he has never since had the slightest return of the disease. The disease was of that character which must have destroyed him, if it had been permitted to go on; so threatening was its appearance, that the very dentist to whom I sent him, refused to take out the teeth, and I had to do it myself. This, then, is an important case, the gentleman being now alive. I thought it right to trouble you with the narration, because I deem it right to explain why an operation is undertaken under circumstances like the present.

ENCYSTED TUMOUR.

Mr. Vincent next removed an encysted tumour, as large as a small orange, from the axillary side of the right mamma of a young woman; and having applied two or three ligatures, brought the edges of the wound together by sticking plaster.

EXCRESCENCE.

An excrescence, about the size of an ordinary marble, and of a warty or nævus nature, was next removed from the outside of the forearm of a muscular man, by the same operator. It was partly superficial, and partly subcutaneous. It had existed for many years; but within the last few months, by irritation, had enlarged and become exceedingly troublesome. It was described as a wart, but Mr. Stanley, on cutting into it after it was removed, considered it to have more of the nature of a nævus.

These operations were all neatly and quickly performed.

Mr. Chenevix went round the wards *magnetising*, as it was rumoured, some of the patients; but if it was intended to benefit the patients, it certainly was not meant to instruct the student. In every instance, Mr. Chenevix took the patient into one of the sister's rooms, and refused permission to any of the pupils to follow. This course was by no means relished by the students.

AMPUTATION OF THE KNEE.

Henry Herbert, ætat. 16, with dark eyes, dark complexioned and sallow appearance, was admitted under the care of Mr. Earle, Feb. 20, with disease of the left knee-joint. The disease had existed for three years. For some time past, abscesses in the neighbourhood have discharged considerably. Every attempt was made to save the leg. Of late, the patient's constitution had suffered. Diarrhœa supervened a few days before the operation, and it was at last deemed necessary that amputation should be resorted to. About one o'clock on Saturday last, Mr. Earle commenced the operation by making a circular incision through the integuments at the lower third of the thigh. Having dissected them back, he made another circular incision through the muscles, and dissecting them back also for a short distance, he divided the bone. After applying four ligatures, bringing the flap together, and rolling the stump, the boy was put to bed with one of the veins bleeding rather profusely.

AMPUTATION OF THE LEG.

—— Major, ætat. 11, a pupil at Christ's Hospital, fair haired, and of sallow complexion, was brought into the hospital on Saturday to have his right leg removed, in consequence of a diseased knee-joint. The boy had met with no accident; the disease was of twelve months standing, and supposed to be scrofulous. The opinion of all the surgeons was, that there was disease of the bone, and that it was a case for amputation, which Mr. Lloyd accordingly performed at the lower third of the thigh, by making a double horizontal flap of the integuments, then dissecting them back to the extent of about two inches round the thigh, beginning the elliptical incision on the inner half of the thigh, and making a circular cut through the muscles. The bone was then sawed through close to the divided muscles, leaving only the integuments to form the flap. Several vessels were tied, the stump was covered, the thigh rolled, and the patient put to bed.

The operation in each of the last two cases, was performed in two minutes.

GUY'S HOSPITAL.

REMOVAL OF A TUMOUR FROM THE BACK.

On Tuesday, May 26, Mr. Morgan removed an adipose tumour from the back of a middle-aged man, situated over the lower edge of the scapula. The first incision was made directly across the tumour, and a second from the middle of the first to the top of the swelling, in the shape of an inverted T; the integuments were then dissected back, and the tumour removed in about twenty-eight minutes.

LITHOTOMY.

Mr. Bransby Cooper addressed the pupils, informing them that he was about to operate for lithotomy on a man who was labouring under disease of the kidneys, and, as he believed, ulceration of the mucous membrane of the bladder, but that the operation was undertaken at the patient's own particular desire. The man was accordingly placed on the table, and sounded by Messrs. Cooper, Key, and Green, but no stone could be detected, and he was therefore taken to his bed.

On Tuesday, June 9th, Mr. Bransby Cooper performed the operation of lithotomy on a child, apparently about five years of age. Mr. Cooper stated previously, that although the child was unhealthy, and an unfavourable subject for the operation, it would not be proper to delay the operation longer, in consequence of the urgency of the symptoms. The child being laid on the table, and bound in the usual manner, Mr. Cooper introduced the straight staff, and having (with his two colleagues, Mr. Key and Mr. Morgan) ascertained the presence of a stone, the operation was commenced in the following manner:—An incision was first made with a common double-edged scalpel, to about two inches in length on the left side of the raphe, extending obliquely backwards, dividing the integuments and superficial fascia. Mr. Key holding the staff in his right hand, another incision in the same track, but not quite so long as the first, was the next step. Several smaller incisions were then made, and the finger and scalpel were observed alternately passing into and out of the wound with some apparent difficulty; the point of the scalpel at length found its way into the groove of the staff. Sir Astley Cooper's knife was next introduced, and the scalpel withdrawn. The operator then laid hold of the staff, and depressing it considerably, carried forwards the knife into the bladder; no gush of urine followed, which could be perceived by those who were at some distance from the operating table, but a great deal had passed by its natural course during the former part of the operation, previously to the opening being made through the perineum into the bladder. Having withdrawn the staff, &c., the short forceps were introduced into the bladder, but the attempt to extract the stone proved of no avail. Alternately they were removed, and the fore-finger introduced, and the ope-

rator seemed to evince some degree of impatience, until at length the long forceps were used, when a very large stone, of an oval shape, was extracted, seven minutes and a half occurring from the time of the first incision.

Mr. Key afterwards removed a large fatty tumour from the left axilla of a woman. The operation was very neatly and dexterously performed. It was not found necessary to secure any vessels, and the lips of the wound were merely brought together by strips of adhesive plaster.

ST. THOMAS'S HOSPITAL.

COMPOUND FRACTURE OF THE TIBIA AND FIBULA.

Thomas Harman, admitted on May 16, at ten, A.M., into Jacob's Ward, No. 13, under the care of Mr. Green, with a compound fracture of the tibia and fibula, low down in the middle third, caused by a cart wheel crushing it against a post about six hours previously. The wound, which is just over the spine of the tibia, is about an inch and a half long, through which the upper portion of the bone protrudes, pressing the integuments into a fold beneath. Mr. Green having attended at about twelve o'clock, removed the projecting portion of bone in an oblique direction downwards and backwards with Hey's saw, observing that while the shortening of the bone rendered the reduction more easy, the oblique direction in which it was removed, would prevent the irritation which might otherwise be caused by the pressing of the integuments against the sharp edge of the tibia. The limb was then extended, and the reduction effected, without any great difficulty; after which the wound was dressed with a little lint dipped in the blood, and the limb put up in Amesbury's fracture apparatus, in such a manner as to keep up slight extension.

17. Has passed a good night, and is now free from pain. Bowels rather confined. Castor oil half an ounce.

18. Bowels freely operated on by the medicine yesterday, and have been moved once to day. Pulse 114, full. The leg hot, and there is a blush of inflammation extending some distance above and below the wound, which is sealed with blood. Complains of thirst; tongue white; says he is not in any pain.

19. Leg hot and swelled; blush extended; pulse 116, full; tongue white; thirst continues.

21. Has passed a restless night, but expresses himself as easier since the wound has been dressed. Inflammation and swelling extended as far as the knee above, and to the ancle and foot below, wound suppurating.

22. Been more tranquil during the night; heat and swelling less.

23. Inflammation much diminished, but there is still some heat and redness of the part; free from pain; bowels open; tongue whitish.

26. Much better in every respect, and has continued to do well ever since, excepting a slight attack of diarrhœa, which is now (June 2) yielding to the use of chalk and opium.

REMOVAL OF THE RIGHT LOBE OF THE THYROID GLAND.

The first operation was for the removal of an enlarged gland (the thyroid) from the neck of Mary Gale, a young woman, twenty-four years of age. She had been in Guy's Hospital some months since, and had there taken iodyne to a large extent. The tumour is now, she says, much smaller than at that time, and the integuments are quite loose over it. On Friday, May 22, an operation having been determined on at her own desire, the patient was placed on the operating table. Soon after one o'clock, Mr. Green made the usual elliptical incision, and having dissected back the integuments, began dissecting out the tumour at its base, but several large arteries were divided, and obliged to be tied during the operation, and it was found impossible to remove the whole of the gland, on account of the large vessels in the neighbourhood; the operation lasted twenty minutes; the wound was dressed with dry lint.

23. Complains of headach, thirst, and pain in the neck; tongue coated, brown; pulse 102, small, and weak. Calomel three grains.

24. Has passed a tolerable night, and is free from headach; bowels rather confined; tongue brown and dry; has not any pain in the neck, except on swallowing; pulse 102, small. Common enema.

25. Has slept pretty comfortably, and does not complain of any pain; tongue still brown, but not so dry as yesterday; pulse 110, rather more full; wound rather sloughy. Calomel three grains; an effervescing draught every four hours; fever diet; a bread poultice to the wound.

26. Tongue more moist; free from pain. Mercury, with chalk, three grains; opium half a grain twice a day.

28. Going on well.

30. Has been restless during the night. Cough; thirst; pulse 106, small; bowels

open; ipecacuanha three grains every four hours; lotion of chloride of soda on lint under the poultice.

June 1. Free from pain; bowels open; wound looking healthy; arrow-root and milk.

3. Appetite improved; spirits good; bowels regular, and doing well in every respect.

June 4. Has been much disturbed during the night by the ravings of a woman delirious in the same ward. Is still restless, pulse 114, small, and rather sharp; bowels open; very weak. Take of

Mercury and chalk, three grains;
Opium, quarter of a grain.

Brandy, two ounces daily.

5. Granulations pale and flabby; difficulty of swallowing increased; tongue brown, dry, and cracked. Is annoyed by light; twitchings of the lower extremities; pulse very small.

Infusion of roses, one ounce and a half;
Tincture of henbane, 15 minims every six hours;
Port wine, ounce and a half. Fish.

6. At twelve A.M. delirious at times during the night. The twitching continues, and the disturbance at light. Heat of head; tongue brown and dry; pulse very small. Had a rigour at about four A.M.

Camphor mixture, one ounce and a half;
Carbonate of ammonia, five grains;
The black drop, four minims every four hours. Two eggs.

Port wine, four ounces daily. Beef tea.

Four P.M. Pulse 132, more full and incompressible; much heat of head; tongue parched. Mr. Green requested Dr. Roots to see her, who *recommended* the head to be shaved, leeches applied to the temples, the stimulating plan to be discontinued, and to take some of the mercury with chalk. Ordered four leeches to each temple; mercury, with chalk, five grains twice a-day; the port wine, &c. to be *rather increased*. She became much more quiet after the leeches had been applied, and slept pretty tolerably until about two A.M., when there appeared more difficulty of breathing; twitching of lower extremities returned with tremors, and the countenance became blue, but appeared to rally again for a time at twelve in the day. Being very irritable and delirious, the dresser ordered twelve leeches to the temples, but she did not experience any relief, and died in the evening in convulsions.

The portion of the gland removed was the right lobe of the thyroid.

TO CORRESPONDENTS.

Communications received from J. W. B.—Mr. Dewhurst—Mr. Alexander Stewart—R. G., Dublin—Mr. W. Smith—A Medical Pupil—An Apothecary's Apprentice—Mr. Thomas Williams—Z.—H. J. G.—Mr. Litchfield—Mr. Clapperton.

We are obliged to Gulielmus, but his paper is not *quite* the thing.

Mr. Hood's work will have our attention at an early opportunity.

Several communications in hand will be inserted next week.

BOOKS RECEIVED FOR REVIEW.

The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs: comprising an Account of the principal Places resorted to by Invalids in England and the South of Europe; a comparative estimate of their respective merits in particular Diseases; and general Directions for Invalids while travelling and residing abroad. By James Clark, M.D., R.C.P.L., &c. London, T. and G. Underwood. 1829. 8vo. pp. 328.

On the Varieties of Deafness, and Diseases of the Ear, with proposed methods of relieving them. By William Wright, Surgeon-Aurist to the late Queen. London, Hurst. 1829. 8vo. pp. 295.

The Claims of Forensic Medicine, being the Introductory Lecture delivered in the University of London, May 11, 1829. By John Gordon Smith, M.D., Professor of Medical Jurisprudence. London, Taylor. 1829. pp. 28.

Observations on the Phrenological Development of Burke, Hare, and other atrocious Murderers, with Measurements of the Heads of notorious Thieves, presenting an extensive series of facts subversive of Phrenology. By Thomas Stone, Esq., Pres. Royal Med. Soc. Edinburgh, Buchanan. 1829. pp. 75.

An Essay on the Symptoms of Pregnancy, from the Earliest Stage to the Period of Quickening, &c. To which was awarded Dr. Hopkins's prize gold medal for 1829. By John Morley. London, Highley. 1829. pp. 48.